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ABSTRACT

This collection of research projects includes: "What Types of Questions Do Mathematics Teachers Ask?" (Cynthia L. Adams); "Will Alternate Assessment Formats Create a Difference in Student Motivation to Study?" (Robyn J. Allen); "Factors Affecting the Motivation of Students" (Dejon J. Banks); "The Dynamics of English Classes with Gender Minorities" (Cameron Cole); "Addressing Gender Inequity in Math" (Christina Cronrath); "The Effects of Intrinsic Motivation, Self Esteem and Gender on Mathematics Achievement" (Tracy Foote); "The Use of Pre-Reading Strategies To Teach Reading in Secondary Level Spanish Classes" (Emily Getz); "Does Parental Involvement Affect Student Achievement?" (Lauren M. Hancock); "Does Gender Grouping Affect Science Achievement in Rotating and Stationary Labs?" (Marie Haymes); "The Selection and Implementation of Authentic Literature in the Foreign Language Program" (Jennifer C. Johnson); "It's No Laughing Matter" (Jeanie Marklin); "The Underlying Paradigms of ESL among Social Studies Teachers" (Marie Ann May); "Student Perceptions of Effective Teaching" (Sarah McCullough); "The First Five Minutes: A Study of Four Teachers' Use of Initial Teaching Moments" (Travis Whitfield McLeod); "Comparison of an Advanced Writing Course On Line versus on Campus Taught by the Same Instructor" (Rigoberto Morales); "Proximity, Touch, and Participation" (Cameron T. Morris); "The Effectiveness of Global versus Focal Questions in Secondary English Class Discussions" (Jill Ochs); "Teacher Response to Wrong' Answers in the English Classroom" (Emily E. Orser); "Methods and Philosophies of High School Social Studies Teachers" (Patrick H. Rickelton); "Effects of Calculator Use on Student Work" (Jean Marie Shaw); "What Motivates Student Leaders" (Jennifer R. Shelton); "Archetypal Criticism in the Classroom and Student Response to Literature" (Zachary Vonnegut); "Teacher Use of the

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Target Language in the Secondary Spanish Classroom" (Todd A. F. Warren); "Team Learning: A Pilot Study" (Brooke A. Whitworth); and "What Motivates Secondary Social Studies Teachers To Use Primary Sources?" (Susan Wiseman). (Papers contain references.) (SM)

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Studies in Teaching
2001 Research Digest

Research Projects Presented at Annual Research Forum

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December, 2001

Leah P. McCoy, Editor

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What Types of Questions Do Mathematics Teachers Ask?

Cynthia L. Adams

With Leah P. McCoy

Wake Forest University
December, 2001

Introduction

It is no secret that questions play a major role in the classroom. As one of the most frequently used teaching strategies, "asking questions is the workhorse of classroom teaching"(Otto, 1991, p.44). When discussing the classroom, it is important to note that, "to a large extent, the teacher directly determines the climate in which learning occurs" (Goor & Roe, 1989, p.323).

In the traditional classroom setting, "questions are the most commonly used means of promoting student involvement"(Goor & Roe, p. 323). They can be used to check for student understanding, stimulate discussion, invite curiosity, ascertain students' prior knowledge and to stimulate critical thinking. (Harris, 2000). In fact, the level of student thinking, is said to be directly proportional to the level of questions being asked (Clasen, 1990; Savage, 1998). Thus, "the primary purpose for questioning is to promote thinking" (Fairbairn, 1987, p.19).

Review of Literature

Many studies have involved the use of questioning as a teaching technique in the classroom. The sheer bulk of studies alone attest to the pervasiveness of this practice (LeNoir, 1993). Dean (1986), states that of the main goal of education is to prepare students to live and participate in society. In order to do this, educators need to equip their students with the tools to think and act independently. "Proper questioning techniques used in the classroom will allow the teacher to properly assess progression to this point" (Dean, 1986, p.184).

There is not much dispute about the significant role that questioning plays in the classroom. The divide appears when reference is made to the effectiveness of the question and its impact on student achievement. In a meta-analysis conducted by Redfield and Rousseau (1981) concerning the relationship between the level of teacher questioning and student achievement, it was found that the "predominant use of higher level questions during instruction has a positive effect on student achievement" (p.241). They also concluded that, "gains in achievement can be expected when more higher cognitive than lower cognitive questions are used during instruction" (p.244).

Another school of thought has found that a mixture of low and high level questions is more desirable. In a study conducted by Martin (1978), examining the impact of higher-order question teaching strategy on student behavior and achievement, it was found that "the use of multiple levels of teacher questioning, involving a structured sequence of low- and higher-order questions, has a more beneficial effect on student achievement than frequency of higher-order questions" (p.187).

Then there is still yet another side of the discussion. This lies in research that does not confirm any correlation between the level of question and student achievement. "The present quantitative synthesis of studies on the effects of higher cognitive questioning suggests that it has a small effect on learning measures (median effect size = .13)" (Samson et. al., 1987, p.290). LeNoir reports, when referring to issues concerning the level of questioning, that "despite the seemingly interminable flow of research, very few of the issues that educators perceive in these strategies can be considered completely resolved" (p.349).

There is an even more powerful opposition to the use and significance of higher-level questioning. This opposition can be found right in the classroom. In studies conducted by Gall (1970) and Galloway & Mickelson (1973) it was reported, "teachers' classroom interaction indicates that 60-80 percent of teacher questions require the lowest cognitive level of thinking to answer"(Otto, 1991, p.44). "The trouble is, many teachers do not progress beyond the simple, knowledge-based questions"(Ornstein, 1987, p.72).

Although there is some opposition to the importance of the level of questioning, most of the research supports the need for more high-level questions to be used to promote critical thinking.

So the question is this, "What is the questioning atmosphere in the mathematics classroom?" Has the research concerning the importance of higher-level questions on the development of critical thinking made an impact on the classroom? Does the level of questioning asked on written assignments reflect the level of questions in classroom interactions?

The goal of this study was to examine and record questions asked by the classroom teacher, and classify them according to Bloom's Taxonomy. Similarly, test questions were also classified.

The purpose of this examination was to describe the questioning levels going on in the mathematics classroom and to describe the relationships between the questioning levels in the classroom and on the tests.

Methodology

Two Winston-Salem/Forsyth County high schools were involved in this study. From these two schools, eight mathematics classes were chosen. These classes were those of the four mathematics Master Teachers who work in conjunction with the Wake Forest University Education Department. The mathematics content involved was Geometry, Algebra II, and Pre-Calculus. Of the eight classes observed four were honors classes and the others were regular classes.

Qualitative methods were used to collect and analyze data from the participating classes. The data collection method employed was observation. Each class was observed between three to five class periods and the questions asked by the teachers during these lessons were categorizes as either knowledge, comprehension, application, analysis, synthesis, or evaluation questions based on the classification guidelines of Bloom's Taxonomy. To support the observer, each lesson was also tape recorded to ensure that no questions were missed. In total, 17 class periods were observed. In addition to the classroom data, test question data was also collected from each teacher.

The analysis of the data collected involved calculating the percentages of each question-type asked in class and on the test for each teacher and also running a Chi-Square Goodness of Fit Test on all the data testing for equality of questioning categories.

Results

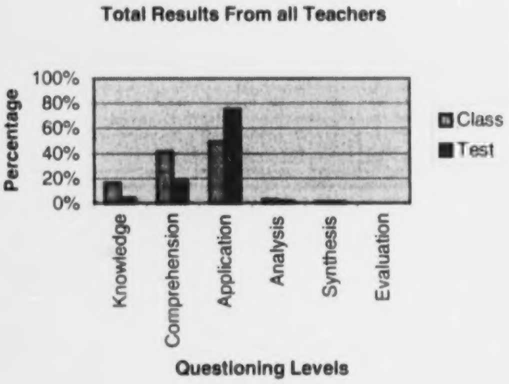
The data was analyzed using Bloom's Taxonomy for questioning. Each question asked was classified as knowledge, comprehension, application, analysis, synthesis, or evaluation. Questions that were unclear, concerning their classification, were examined by a group of educators and a general consensus was arrived at for each question. The following are examples of questions and test items that fall into each of the six categories:

Knowledge	❖ What is the definition of a domain? ❖ The sum of the measures of the interior of a triangle is?	Analysis	❖ Which of the following statements are true based on the two triangles shown?
Comprehension	❖ In the figure, what segment is congruent to QR? ❖ What is a possible equation of a horizontal line?	Synthesis	❖ Prove that the angles opposite congruent sides of a triangle are congruent. ❖ The diagonals of a rectangle are equal. Put that in if-then form.
Application	❖ Sketch and determine the quadrant in which the terminal side of an angle 6 /5 lies. ❖ A bicycle wheel with an 18-inch diameter rotates 120 . What distance has the bicycle traveled?	Application	❖ Give an example of a relation that is not transitive. ❖ If we were to define a/d + b/d = (a+b)/(c+d), what would be some of the consequences of this definition.

When comparing all the teachers with each other, there does not seem to be that much of a difference between them. They all ask lots of lower-level questions but ask very few higher-level questions. Their patterns for asking questions in general are very similar. The only noticeable difference is with the test items asked by Teacher B in comparison to the other teachers. Her test questions were almost all application.

When the data was considered all together, the results were very similar. Using the Chi-Square Goodness of Fit Test, the data was combined together and was tested for category equality. Two tests were separately run: one on the test data and on the class data. The results from these tests showed that the data was not evenly spread over all the questioning levels. The table and chart fully support the results. The differences can be plainly seen. For the class questions, the bulk of the questions fell in the lower level side; very few questions were asked in the higher levels. For the test items, the same is true.

	Class	Test
Knowledge	16%	4%
Comprehension	41%	18%
Application	49%	75%
Analysis	3%	2%
Synthesis	1%	1%
Evaluation	0%	0%



Conclusions

In the mathematics classrooms that were observed it was found that the questions that were asked during classroom discussions were very similar to the questions asked on the tests. The percentage of each questioning type for class and test differed very little. Concerning the percentage of questions asked for each questioning level, it was found that 96% of all the questions asked by the teachers both in class and on the tests were low level. These results strongly support the research done by Gall (1970) and Galloway & Mickelson (1973) that reported, "teachers' classroom interaction indicates that 60-80 percent of teacher questions require the lowest cognitive level of thinking to answer"(Otto, 1991, p.44). After observing these classes it can be said that research concerning the importance of the use higher-level questions has had little impact on these classrooms.

These results, however, cannot be generalized to all mathematics classrooms because the sample size of classrooms was far too small. Further, more extensive research needs to be done in order to generalize these findings.

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Will Alternate Assessment Formats Create a Difference in Student Motivation to Study?

Robyn J. Allen

With Robert Evans

Wake Forest University

December, 2001

Introduction

In science, there are many possibilities for testing ones students; multiple-choice, portfolios, essays, projects, presentations, lab practicals, or problem solving, all of which provide ways to see how much students have learned of the content required of them. The current movement is to have tests include important aspects that should be an integral part of any science curriculum—the nature of science and scientific literacy. These themes stem from the idea that science should be taught as method of thinking, not the mere memorization of facts and formulas. Classroom environments foster certain types of motivation in students—ego- or task-orientation, where students are focused either on their grade or on mastery of the task or concept. Could the assessments from an environment such as this also provide knowledge motivation from students?

Review of Literature

Many scientists and educators agree that science classrooms and science assessments should motivate and encourage scientific literacy and an understanding of the nature of science, along with the needed content to have a complete science education. Science literacy is the idea of a "broad and functional understanding of science" by the public (DeBoer, 2000, p.582). Researchers suggest that science literacy needs to be a component of science standards, so that a student can apply concepts to real world applications both within a classroom and once he or she has moved beyond it (Champagne et al., 1992; Shymansky et al., 1997). To other researchers, the nature of science is also important to express to students. The nature of science is the way in which the values that are basic to science, its knowledge, or the development of knowledge are developed, such as asking questions or seeking evidence from a testable problem (Lederman, 1992). The understanding of science itself involves realizing that science knowledge can change, is taken from observations of the world, is composed of theories and laws, is a product of some form of human involvement, and is a part of the social culture (Bell, Lederman, and Abd-El-Khalick, 2000). Even when aspects such as scientific literacy and the nature of science are placed within the curriculum, the researchers note that conventional testing methods do not assess these thought processes adequately (Champagne et al., 1992). For this reason, they types of assessment methods should be looked at more closely.

Conventional forms of assessment "are paper-and-pencil examinations that require the student to choose a correct answer from several possibilities," usually multiple-choice or matching (Champagne et al., 1992, p.846). As Roth states (1996), "[Standard] Tests. . .focus students' and teachers' attention on getting ready for, taking and teaching to tests, rather than the process of learning. Attention focuses on passing rather than participating to become more competent. . ." (p.818). The alternative assessment format seeks to show achievement by testing student thought processes as well as their factual knowledge (National Goals, 1990—within Champagne et al., 1992, p.842). These methods maintain that constructed knowledge varies from child to child and tries to evaluate the process behind how the student reached a final answer (Champagne et al., 1992).

Writing, a form of alternative assessment, is a way to construct knowledge in a personal manner, so hopefully students will retain the material longer (Rivard et al., 2000). It is this personal aspect, or the ability to write a concept or process in one's own terms, that helps make the material relevant thus increasing retention (Rivard et al., 2000). By writing, students can examine their own understanding of a concept; they can look for gaps in knowledge or misunderstandings, organize their thoughts, and make better "interpretations and arguments" (Glynn et al., 1994).

Student motivation has been shown to increase in environments that are stimulating and engaging, especially when students want to learn to master the knowledge and not merely to make a good grade (Ames et al., 1988; Nolen et al., 1990). One can infer that the types of tests a teacher employs could play a part in student perception of classroom goals; a teacher establishes a certain environment and assessments will naturally be a product of that teacher and that environment. Champagne et al. (1992) believe that alternative assessments can increase motivation to learn science since their focus is on the thought process in thinking scientifically when solving a problem. In addition, research has shown that writing essays, similar to other alternative assessments, helps to develop constructivist learning of science and scientifically literate students—important aspects that should be emphasized in all science classrooms by all relevant means.

The goal of this research is to determine if alternative assessments, such as essay writing, will motivate students to study more than traditional methods, like multiple-choice formats. Therefore, the null hypothesis for this research is: there will be no significant difference in motivation to study for essay or multiple-choice assessments.

Methodology

At the beginning of the study, students in each of four honors Chemistry classes were told that they would be given four quizzes, two multiple-choice and two essay, on material covered in class over the next several weeks. They were told that the quizzes would be daily grades, worth five points, and would not take up much of their class time. They were given the opportunity at this time to sign informed consent forms, as well as their parents in order to participate in this study. Each format was evenly distributed throughout the day to make sure that the time of day did not play a factor in data--one essay and one multiple-choice in the morning, and one to each in the afternoon. Each class also alternated the type of quiz they received over the four administrations. Attached to each quiz was the Motivational Survey that was designed by the researcher. The survey consists of two questions with a Likert Scale response set; one asks how much time the student spent studying for this quiz, and the other asks how this compares to their usual time spent studying. An open-ended question was also included that asked what motivated the student to study the amount that he or she did for this quiz. Interviews of two randomly selected subjects from each class were conducted at the conclusion of the experiment to gain more qualitative understanding of how students were motivated by the different assessment formats.

Results and Conclusions

After the conclusion of the four quizzes, all of the data was collated together to compare the responses to the essay and multiple-choice quizzes. A total of 161 essay quizzes and 150 multiple choice quizzes were analyzed. A t-test was performed on the two data sets—the first (Question 1), responses to time spent studying and the second (Question 2), comparing quiz studying to normal study time. The following table summarizes the analyzed data.

Survey Question	Quiz Format	Mean of Responses	Standard Deviation	t-value for Question	Significance Value for Question
1	Multiple-Choice	1.7600	0.6521	-1.704	0.089
	Essay	1.8944	0.7383		
2	Multiple-Choice	4.0733	0.8831	1.541	0.124
	Essay	3.9130	0.9513		

Table 1. Comparison of t-test statistical analysis.

Neither data set is significantly different between the quiz formats, with students studying the same amount of 1-15 minutes, which was an amount a little less than normal for most students. Therefore the null hypothesis had to rejected. Students responded in many different ways to the third, open-ended question. The following chart shows some of the more prevalent responses and how often they occurred in the surveys for each quiz format.

Responses to Question 3—What was your motivation for studying this amount?		
Quiz Format	Response to Question 2 on Survey	Qualitative Response to Question 3 (including percentage occurrence from total responses)
Multiple-Choice	A little less than normal (4) or a lot less than normal (5)	• knew material from class, content was easy—19% • forgot about quiz—15% • multiple-choice is easy—12%
	Normal (3), a little more than normal (2), or a lot more than normal (1)	• get a good grade, be prepared—7% • easy material, only needed to refresh mind—3% • multiple-choice is easier—1%
Essay	A little less than normal (4) or a lot less than normal (5)	• knew material, material was easy—18% • forgot about the quiz—17% • no motivation to study—6%
	Normal (3), a little more than normal (2), or a lot more than normal (1)	• have to study more for essay—7% • get a good grade—4% • to refresh mind about material, knew material—3%

Table 2. Summary of Responses to Question 3.

The interviews also provided pertinent information concerning student ideas about their own motivation; the following table describes the findings.

Responses from Interviews (eight were conducted)	
Question	Responses (with percentage of occurrence)
1	• yes; essay because have to remember answers and need to explain answers—50% • not really; felt comfortable with material or neither was more important than the other—38% • yes; multiple-choice because it easier to get things confused
2	• all assessments are the same—75% • study more for fill-in-the-blank—13% • study more for oral exams—13%
3	• motivated by content; difficult nature or more interesting—100%
4	• good teacher makes you study more—38% • not motivated by teacher or environment—38% • confusing teaching style makes you study more—25%
5	• grades motivate most—100%

Table 3. Summary of Interview Responses.

Though the null hypothesis had to be rejected due to the significance values, much of the qualitative data supports the idea that some students are motivated to study differently for certain types of assessments. One might suppose from the student responses, that if the study was more developed, with an in-depth look at each of the many variables, then a difference between the formats might have been found. Overwhelmingly throughout their responses on the surveys and in the interviews, students said they were more likely to study if the assessment had been worth more or the material had been more difficult. These self-reflections gave insight into what actually is motivating the students to study—the worth of the assignment and how well they will perform. Assessments therefore might not be the best way to find motivate students to look beyond their grades and to focus on the concept at an in-depth level. Even though alternative and challenging assessments can encourage students to have a more genuine learning and understanding of science through science literacy and the nature of science, this project showed that they probably do not have much effect on a student's motivation to study. In the interviews, several students said that they were motivated to study by the teacher or the classroom environment, and this factor probably causes the most student motivation to study. Data from this experiment reveals, that only in concert with teaching techniques and curriculum that also emphasize the importance of science literacy and the nature of science, will assessments help to provide that motivation to study for a mastery of the content.

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Factors Affecting the Motivation of Students

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With Raymond C. Jones

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December, 2001

Introduction

This study looked at variations in motivation among black and white students who attended schools in different settings. A few studies suggested that race and setting could be among the factors that affected student motivation (Mayeske, 1970; McInerney & McInerney, 2000; Samuel, 1976; Wlodkowski, 1999). Once a learner is intrigued or inspired about a subject, he or she is more likely to master and possibly enjoy attaining the sought after information (Ginsberg & Wlodkowski, 2000). The stimulus that a learner needs to acquire information can either be rooted with in him/her or come from an external source, these types of motivation are respectively referred to as intrinsic or extrinsic.

Review of Literature

Various studies have been performed in order to explore student motivation. The findings of these studies are often contradictory or inconclusive. Wlodkowski (1999) acknowledges that there are differences in motivation based on a student's culture, yet studied ways in which learning motivation can evoke a positive response among all learners. Findings are often contradictory, for Banks (1995) and Castenell (1984) differ from the previous researcher in that their findings have shown no differences among motivation levels between black and white students. Banks deconstructs the myth that black students are inferior in motivation levels than of their white counterparts when he controlled for age, sex, and race in his study, which looked at motivation by highlighting achievement tasks. Another researcher, Louis Castenell, advocates the belief that differences in cultural motivation are a myth. Numerous studies have compared motivational differences in the black and white community, yet my study will specifically look at the possible correlations of culture and setting on motivational patterns of high school youth. Mayeske (1970), conducted a study similar to the one I proposed. His study looked at variations in student achievement and motivation by looking at their family background and geographic location. His studies show that congregating students that have the same background decreases the amount of motivation produced. Though my study is not studying students in different geographical places, I feel it important to observe schools with varying demographics in order to get a sample of students that are in different school settings. A vast amount of research has been done concerning motivation. Despite the wealth of information gathered, none of the studies found have collected interviews from black and white students who attend vastly different schools in order to study their motivational differences.

Methodology

This ethnographic study of black and white students who attend schools in various settings in Forsyth County examined differences in motivation. More specifically, the study explored these questions: do the school setting and race of a student affect his/her level and type of motivation? What reinforces motivational differences among varying cultures? What encouraged students who were extrinsically motivated? Who had the power to motivate a young learner? Did intrinsically motivated learners always fare better in their academics? How could we, the teachers, have aided in this motivation process? I went to the source, the students, in order to get my questions answered.

Three schools that varied in region and demographics were observed and used as grounds for collecting research in answering the questions listed above. During these weeklong observations, I noted various indicators of both intrinsic and extrinsic motivation. A pool of participants was created by relying primarily on teacher recommendations and also on my personal observations from class visits. Twelve students, four from each school, were interviewed in sessions of thirty minutes.

Observing students in the classroom setting and talking to them allowed me to answer many questions and formulate numerous others. In order to figure out what persons and methods were responsible for encouraging student motivation, I went to observe and question the students. Visiting the classroom allowed me to notice students who were involved, intrigued, or engaged in the lesson. Similarly, those who took a more nonchalant attitude towards history, and usually school in general, were easy to detect. My weeklong observations allowed me to watch how the students interacted in the classroom.

While observing I would note which students were on task with the teacher's objectives and directions. I looked for students who participated often or for those who contributed to the class by stating meaningful or relevant statements that enhanced the class. Additionally, students that were prepared for class, had their homework completed, and took advantage of extra credit activities were identified and assumed to be motivated students.

Conversely, students with little motivation portrayed different signs in the classroom. Unengaged and disruptive behaviors identified students that I presumed to be less motivated. Students who were aloof or ones that made constant unrelated and disruptive comments were included in this category. Similarly, students who did not participate often were considered to be lacking in motivation.

After picking the students who were needed to produce a sample, I confirmed my prospective participants with their teacher. My observations allowed me to make sound decisions as to which participants fit the descriptions of the persons needed to create my pool. Teachers' words and records continually stated that the persons I chose varied in motivation. Some were extremely motivated, while others showed no concern for the class. A total of twelve students were interviewed.

Discussion / Implications

This study shows that there is no direct relationship between students who favor history class and how motivated they are to do work for this class. Three of the six self-motivated students reported that history was their favorite class. Only one of those three was white. Intrinsic motivators encouraged themselves to do well in all of their classes.

What was considered important enough for students to spend time on? And, what were the drawing characteristics of the classes that they referred to as their favorites? Engaging students , despite their differences, was a universal theme uttered throughout interviews. When asked to recall their favorite day in history class, students often mentioned playing games, participating in seminars, and producing creative projects. Regardless of the variation in type of activity, teachers do have the power to motivate students by producing creative lessons.

Through observations, I found many factors that affected both groups of students. Despite the fact that there are no definite lines drawn between the motivational factors that affect black and white students of different regions, I did notice that extrinsically motivated students appreciated and needed someone to have high expectations for them. Contrarily, two of the three intrinsically motivated students of both races stated that they preferred motivating themselves for fear of failing to meet their parents' expectations.

Where do the teachers fit into this massive equation? The students rarely mentioned educators, at least not initially. Regardless, students' stories and answers reflected that teachers had a massive influence on them, yet only two of the six students who were considered to be extrinsically motivated referred to a teacher as their source of motivation.

In conclusion, I did not find any factors that were significantly different among the motivation levels of students that vary in race or school setting. Tallies were made to track trends and recurring comments throughout the conversation. Neither race nor school setting played a significant role in determining a student's motivation level. Parental support, teacher stimulation, self-confidence, and aspirations for the future were common factors listed among students.

The plethora of data collected from this small sample pool of twelve students revealed that there are very few "black and white" issues between students of various races. A few regional differences arose among the schools, yet the major differences observed were dependent upon the kind of motivation a student exhibited and possessed.

I performed this study for numerous reasons, one of which was to heed to the advice of sociologists who suggested that further research needed to be done because black students were being labeled as lacking in motivation and needing to be extrinsically motivated. Though these sentiments were true of black students, similar findings support the same evidence for white students.

Future and current educators can benefit from this study because it reaffirmed that students are more academically successful and motivated when they believed that they were capable, valued, and would benefit from the class (Fraser, 1991). The idea of being capable reinforces that students need to have expectations set for them, either by an outsider or by themselves, yet they must feel like they are able to achieve the specific goal. Expectations that are too high cause intrinsically motivated students to get anxious and depressed, while extrinsically motivated students would be more likely to drop out if they felt teacher expectations were too high. My study reaffirms the fact that intrinsically motivated students need to feel in control and often fear that they will not attain the high level of expectations that guardians or teachers have set form them. This truth was most evident among the students at the school that was least diverse and contained a vast majority of white students. All of my findings reported that engaging students with activities enhanced their interest whether or not they received an incentive.

I acquired and affirmed a wealth of knowledge by conducting this small, ethnographic study. Further research on motivation should include a larger sample of students and teachers. Allowing students to complete a survey that contained both quantitative and qualitative questions would also enhance this study. According to my study, regional and racial differences were minor. Instead of highlighting the two previously listed variables, I suggest that future researchers add variables that would include socio-economic, cultural, and gender specific issues affecting motivation. For I noticed that my study ended up having an equal number of male and female participants, yet black males were the extrinsic motivators at all three schools, while black females were ones who preserved intrinsically motivated characteristics.

The accumulated findings have enlightened and encouraged me to motivate students through various methods of teaching. In conclusion, I am convinced that educators are a major factor in the promotion of student motivation.

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The Dynamics of English Classes with Gender Minorities

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Introduction

Participation in class discussion stands as a major part of the educational development of students. Students learn to express themselves orally, speak publicly, and critique the ideas of their classmates in class discussion. Because of the great importance of class participation, most educators would agree that all students should be encouraged to speak in class discussion. However, certain factors in a classroom can inhibit the level of participation that some groups contribute to discussion. One factor that can influence the level of participation that students contribute is the gender dynamics of a class. One way in which gender can affect the levels of participation is when a small proportion of one gender is represented in a classroom. When students are a part of a gender minority, they may be inclined to speak less and thereby limit their oral development.

This study explores the dynamics of classrooms with gender minorities. It examines whether the presence of a gender minority does, in fact, influence the levels of participation among students in the class. Then it explores how the actions of teachers affect the levels of participation in gender minority settings. The ultimate purpose of the study is to better understand the dynamics of class with gender minorities and to see how teachers influence the levels of participation.

Review of Literature

A debate rages in educational research related to gender issues. In response to males achieving at significantly lower levels than girls, a strong movement has recently developed, calling for more attention to focus on the education of males (Warrington, 2000, p.2). Many critics still contend that females are shortchanged in the classroom and argue that more effort should be expended to level the playing field for girls in the classroom (Orenstein, 1994).

Most of the research on gender has been on a broad level. Very little research has been done specifically on gender minorities in high school classes. Most the research done on this topic has focused on gender minorities in college classes. Several feminist scholars have examined the presence of male gender minorities in their women's studies classes (Miner, 1994). Other scholars have studied the presence of female gender minorities at West Point (Yoder, 1989). While these cases have provided some insight into gender minorities, these minorities exist in highly charged environments that are quite different from the average high school English class.

The field of social psychology has dedicated significant research to how being in a minority setting affects people. Research shows that people tend to have the greatest awareness of their gender when they are the minority in a public setting (Aries, 1998, p.282). McGuire (1982) argues that consciousness of one's gender affects women more than men and that females will be affected more significantly in a minority setting than men.

Methodology

Two female and two male master teachers were observed in a high school of the southeastern region of the United States. After preliminary observations, eight classes were selected for observation. Four of these classrooms had gender minorities while the other two had a relative balance of males and females. There were two male minority classes and two female minority classes. (A class with a gender minority was defined as any class where one third or less of the average number of students in a class was either male or female.) The balanced classrooms were intended to be a control to which classrooms with gender minorities were compared.

Both quantitative and qualitative data were collected in this study. All relevant questions and comments made in class each day were tabulated for males and females. Teacher acts that either promoted or discouraged participation were recorded in a journal.

For analysis, the number of responses for the males and females in each class were added up. A statistic called the average percentage of response was designed so that the levels of participation in both the gender minority classes and the balanced classes could be compared. Average percentage of response was defined as the percentage of responses on average a female made in comparison to a male. For example, if the females in one class had a forty percent average percentage of response then the average female in the class would make forty percent of the responses in comparison to the average male, who would make sixty percent of the responses. After these averages were determined, a 2x3 factorial analysis of variance was applied to see whether gender and the interaction of gender and gender setting had a statistically significant impact on student participation. Finally, the journals of all classes were analyzed to see whether trends existed in the teacher acts and student behaviors of gender minorities.

Results and Conclusions

Student Trends

Initial observations led to the inference that the gender setting affected the participation level of students, particularly in environments where a gender minority existed. Students in the gender minority appeared to speak infrequently in class. When they did speak, they would talk quietly or unconfidently. Often times, students in the gender minority would simply nod their head instead of answering orally when a question was addressed to the entire class. Students in the majority tended to participate more and even dominated class discussion at times. Students in the majority were more prone to make comments without being called on.

A 2x3 factorial analysis of variance applied to the data confirmed that gender affected students' level of response. The test revealed that gender had a statistically significant affect on participation levels as males and females participated at significantly different levels ($F(1,36)=2.078$; $p<0.05$) (See Table 2). The data showed that males participated more than females in all settings, except for the male minority setting where they spoke equally.

A 2x3 factorial analysis of variance also revealed that the interaction of gender and gender setting also affected participation levels to a significant degree ($F(2,36)=8.743$; $p<0.05$). The degree by which males participated more than females in the female minority setting was much greater than that level in the balanced setting. In the balanced setting the male average percentage of response was 58.7% compared to 41.3% average percentage for females. In the female minority/ male majority setting, the male average percentage of response was 73.2% compared to 26.8% average percentage for females.

Average Percentage of Response		
Gender Setting	**Female**	**Male**
Female Minority/ Male Majority	**26.8%**	**73.2%**
Balanced	**41.3%**	**58.7%**
Female Majority/ Male Minority	**49.8%**	**50.2%**

Within both genders the level of participation decreased as the percentage of students of their same gender in the class declined. The average percentage of response of students in the minority was lower than the average percentage of students of the same gender in either a balanced or majority setting. The average percentage of response of students in the gender majority was higher than the average percentage of students of the same gender in a balanced setting. For both genders the average percentage of response was highest when they were in the majority and lowest when they were in the majority.

Teacher Trends

A large emphasis in the observation of the four teachers was on what teacher acts influenced the participation of each gender. A very influential factor affecting equal participation was whether a teacher required that students raise their hands. In both male and female gender minority classes, the majority dominated class discussion when hand raising was not required. Aggressive students usually responded quickly, preventing quieter students from participating. The teacher had no control over who spoke and, consequently, could not regulate the conversation if one group of students was dominating class discussion.

A tactic the teacher's with the most balanced level of participation used was "putting students on the spot" by calling on them when they had not raised their hand. Two teachers would call on students of one gender that was not participating in order to spark participation from that group. Although this tactic was used sparingly, they would use "putting students on the spot" to catalyze conversation for that group.

Teachers found ways to regulate the participation of talkative students and encourage the speech of quiet students. Teachers would sometimes repress the comments of very aggressive students when their excessive talk prevented the equal participation of others. Two teachers used this technique carefully, but when loquacious students spoke incessantly, they would ask them to limit their comments. Teachers would also display great excitement when quiet students spoke. They would affirm the remarks of the quiet students and, in effect, encourage them to speak more. These trends were particularly prevalent in minority classes where students of the majority would dominate discussion, while quiet students of the minority needed more encouragement for talking.

Teachers used group work as another strategy for stimulating equal participation. Small groups provided more opportunities for expression and a more private atmosphere for discussion, making it more a comfortable place for students to talk. Participation seemed relatively equal in the small groups observed. One teacher would use group work before class discussion in order to catalyze the ideas of students, so that they would be more apt to participate when the class resumed a whole class discussion. Small groups served as both a setting and a catalyst for equal participation.

Finally, another trend observed in all of the classes was the participation pattern of students sitting in clusters with students of the same gender. In nearly all of the classes with gender minorities, students in the minority that sat in a cluster with students of their same gender participated more than those who were surrounded by members of the opposite sex. During one balanced class, the six males sitting in a cluster made all fifteen of the comments given by males. No males sitting around females made any comments.

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Addressing Gender Inequity in Math

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Introduction

Educational equity is defined as having high expectations and strong support for *all* students. This is considered such a fundamental concept in schools today that the National Council of Teachers of Mathematics (NCTM) has defined equity as one of its six fundamental teaching principles. The principle stresses that equity is not necessarily giving identical instruction to all children but rather, " it demands reasonable and appropriate accommodations be made as needed to promote access and attainment for all students" (National Council of Teachers of Mathematics, 2000). Though it seems that this principle expresses a concept that should go without saying, schools have historically expected less of certain students, while depriving them of extra support they need. Among these groups are students who are not native English speakers; students with disabilities; minorities; and, particularly in mathematics, women.

Review of Literature

As recent as 1990, studies have shown that more females than males stop taking high school math at the Algebra II level. This is significant because Algebra II is considered a major predictor of a student's continuing to college. Furthermore, as of 1994, males still dominated advanced placement courses related to math including chemistry, physics, and calculus (American Association of University Women, 1998; Fan, Chen, & Matsumoto, 1997). In addition to this outnumbering of females, males continue to score higher than their female counterparts on advanced placement tests, despite the fact that more females actually take the tests. The gap of grades in standardized high school tests is not extremely wide, but is consistent and increases with grade and course difficulty (Muller, 1998; Fan et al., 1997).

Further evidence of the gender gap can be seen in college entrance exam scores and in the number of men enrolled in college level calculus classes. Sadker (1999) tells us that men almost always score higher on "high stakes tests" than do women. This includes the Scholastic Aptitude

Test in Math (SAT – M), on which men average 46 points higher than females on the traditional scale of 200 to 800 and the American College Test on which, using a score of 1 to 39, males average 2.6 points better (Bridgeman & Lewis, 1996; Bridgeman & Wendler, 1991).

Perhaps as alarming than the difference in scores are the attitudes that middle school and high school girls hold towards mathematics. Almost all research on gender equity indicates that females have greater anxiety towards math, lower confidence in their mathematical abilities, and less of a desire to pursue a career that relates to math. Furthermore, girls in high school consistently underestimate their talents and overachieve based on what they think they can do (Catsambis, 1994; Heller & Ziegler, 1996; Muller, 1998).

Data has led researchers to believe that socialization and gender stereotypes perhaps play some role in how women see themselves in relationship to mathematics. Heller & Ziegler (1996) note that girls are more strongly influenced by social models than boys, especially around the time of puberty. Girls want to fit in and not break the mold, for fear of being labeled different. In relationship to math, girls may genuinely be concerned that if they succeed in math, they will be considered less feminine so a "fear of success" develops (Bartholomew, 1994). If girls do not see or hear about women in occupations relating to mathematics and science, they tend to discount those jobs as masculine. They see math as irrelevant to their lives and as a burden that causes anxiety and fear (Bartholomew, 1994). This idea is further supported by research that shows girls with mothers in mathematical careers are more likely to enter such fields themselves (Muller, 1998). It appears that if girls have female role models in math, they are more willing to pursue a similar career. It is detrimental that so much socialization occurs around the time of middle school because as girls make an early decision to only pursue the minimal amount of math, they limit their career options at a very young age.

In order to capture the interest of girls and increase the number of women going into mathematical fields, the American Association of University Women advocates the development of curriculum or other incentives to encourage girls in math (1998). Programs in the past such as the EQUALS Project have worked toward this goal of developing materials for math classes that will reach all students, including females. It is the belief of the researcher that such curriculum along with focused verbal and written interventions is the best way to increase female self-concept about math and improve performance. Therefore, this research will focus on a teaching method that will make students aware of women who studied various facets of math while explaining how their studies are still important today. Because of time constraints, this study revolves around one such lesson that was presented to a group of high school pre-algebra students. Ideally, an entire set of lessons would be created in conjunction with various topics that are a part of the normal high school curriculum.

Methodology

The subjects of this study were 22 pre-algebra students from a high school in North Carolina. At the opening of class, students were given a survey assessing their attitudes towards math and their attitude towards women mathematicians. Then they participated in a lesson revolving around the work of two female mathematicians. It was taken from a book entitled, "Changing the Faces of Mathematics," which contains various lessons focusing on women in mathematics (McCoy, 2001). A worksheet guided students through the Internet to sites about these women and the researcher tied this information into a lesson that related to the standard pre-algebra curriculum. Students retook the attitude survey at the end of the 90 minute period to see if the activity had an impact on their thinking about mathematics.

Student surveys were evaluated based on the number of positive responses given. Positive responses were those that indicated interest in math or belief that women can succeed in math. A 2x2 Factorial ANOVA was used to determine significance of mean differences in math attitude.

Results

Data analysis showed that math attitude decreased in males and females from the beginning of the activity to the end (see Table 1).

Table 1: Descriptive Statistics for Math Attitude Survey

Test	Gender	Mean	Standard Deviation	N
Pretest	**Male**	16.36	3.586	14
	Female	17.43	4.117	7
	Total	16.71	3.703	21
Posttest	**Male**	14.50	2.550	10
	Female	12.11	2.088	9
	Total	13.37	2.587	19
Total	**Male**	15.58	3.269	24
	Female	14.44	4.066	16
	Total	15.13	3.603	40

While the difference between the pretest and posttest means is found to be significant (F(1,36)=12.023), table 2 illustrates that gender and the interaction between test and gender are not significant.

Table 2: Effect of Gender and Pretest/Posttest on Math Attitude

Source	Sum of Squares	df	Mean Square	F	Sig.
Pretest/posttest	121.005	1	121.005	12.023	.001*
Gender	4.080	1	4.080	.405	.528
Interaction of Pretest/Posttest and Gender	28.147	1	28.147	2.797	.103

*indicates this difference is significant, $p<.05$

Conclusions

The activity did have a significant effect on student attitudes towards mathematics and towards women in math. However, it was not the effect that the researcher was expecting to get. All mean scores indicated that students valued math *less* and had *lower* opinions on women in math after the activity on women in math.

One explanation for the unexpected results is that the class was rushed at the end of the period when filling out their final surveys. Thus, fewer surveys were thoughtfully completed and returned. If a question were not completed, it would not be counted as a positive response. This may explain why the mean of female scores is significantly lower on the "women" subscale for the posttest than on the pretest. The fact that the mean decreased so drastically (from 9.57 to 5.33) is likely not because the women views changed that much through the activity. What is more likely that time played a factor in the low scores for the second subscale. Another possible reason for the poor results is that the activity was not really brought around to practical uses of the math.

For future research, adding practical applications to the lesson would help students better connect what they are studying to their lives and would probably make them more interested in the math. Also, it would be good to use a series of lessons about women instead of just one. This way, students see that these women are not isolated examples but that women are an integral part of math history.

It appears that female attitudes towards math are still lower than male attitudes. Past research has shown this and this research provides further support of this. If society is ever going to have women enter mathematical fields, it is going to have to improve these attitudes because no one wants to work in a field in which they feel inadequate. A consistent integrated approach is part of the answer to this problem as girls will see women as part of mathematics and gain more confidence in their own abilities.

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The Effects of Intrinsic Motivation, Self Esteem, And Gender on Mathematics Achievement

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Introduction

In mathematics, many students perform poorly and mathematics enrollment in post-secondary institutions is low (Randhawa, Fan Ng, & Beamer, 1989). On the other hand there are students who achieve in mathematics. So, there is definitely a need to understand what personal and social factors influence students' mathematics achievement and academic choices. Multiple research studies have been conducted on intrinsic motivation, self-esteem/self concept, and gender and the effects that these variables have on academic achievement in mathematics. Researchers have found that these variables are positively correlated to mathematics achievement. However intrinsic motivation, self-esteem and gender are only a few variables that affect mathematics achievement.

Literature Review

Intrinsic motivation from the academic standpoint is the desire or drive of students to engage in learning for its own sake. Students who are academically intrinsically motivated feel that learning is important with respect to their self-images, and they seek out learning activities for the sheer joy of learning (Middleton & Spanias, 1999). Although many researchers fail to discuss the effect(s) of motivation by subject area, research by Deci, Ryan, and Gottfried suggest that intrinsic motivation has an effect on academic achievement in mathematics. In one such study, Gottfried (1985) used an intrinsic motivation inventory that she developed to assess children's intrinsic motivation for the specific subject areas of reading, math, social studies, and science. This research found that academic intrinsic motivation is positively related to school achievement. Research conducted by Deci and Ryan (1985) also revealed positive correlations between intrinsic motivation and achievement.

Self-esteem, which is used interchangeably with self-concept, involves one's perceptions of their self. Because academic ability is viewed as essential to the preservation of self-worth, students consider it critical to be perceived as intellectually capable and competent. Cross-lag correlational studies indicate that self-esteem is not a cause of academic success but an effect (Holly, 1987). Thomas-Brantley (1988) hypothesized that a significant relationship would be found to exist between self-esteem and academic achievement. The results of the statistical analysis of the data revealed that there was a positive correlation between self-esteem and academic achievement.

In 1995, Karsenti and Thibert found that academic motivation is significantly related to school achievement (GPA). However, intrinsic motivation seems to better foretell school achievement for boys (Karsenti & Thibert, 1995). Research by Thomas-Brantley (1988) found that the differences between males and females in that study with respect to academic achievement were highly significant favoring females. Randhawa (1989) on the other hand reports, "during high school years, males generally outperform females" (p. 6). Such sex differences in math achievement have been explained of the basis of underlying ability, differential course-taking, socialization in affective and motivational factors such as attitudes, and acquisition of autonomous learning behaviors (1989). The discrepancies associated with gender and mathematics achievement have been a concern for a long time.

Methodology

The subjects involved in this study were three classes of Algebra I students at a suburban high school in North Carolina. The students' grade level ranged from freshman to senior. These classes were selected because of availability. Students were invited to participate in the study and were assured that they could choose to not participate at any time without penalty.

The students were given the *Piers-Harris Children's Self Concept Scale* to measure their self-esteem/self concept. The students were also given a modified version of *The Intrinsic Motivation Inventory* used by McAuley, Duncan, and Tammen (1989). Prior to this time the subjects were informed of the purpose and objectives of this study. The students' class activities and daily routines were conducted as normal. In mid November the students' achievement averages in the Algebra class were calculated.

In analyzing the results of the study, Correlation was used as the inferential statistic. The variables were gender, level of intrinsic motivation, level of self-esteem and academic average in mathematics at the cut off date.

Results and Conclusions

Analyses were conducted on the variables—achievement, gender, self-esteem, and intrinsic motivation. The scores were obtained by using the measures mentioned above. The means and standard deviations for the variables are presented in Table 1.

In all correlations reported, Pearson Correlations were used. The correlations are presented in Table 2. The hypothesis that intrinsic motivation, self-esteem, and gender are significantly related to mathematics achievement was correct in only one aspect. Intrinsic motivation was positively and significantly correlated to achievement. Neither self-esteem nor gender was significantly related to mathematics achievement.

Table 1

Means and Standard Deviations

VARIABLES	**MEAN**	**STANDARD DEVIATION**	**N**
ACHIEVEMENT	79.4509	9.0541	53
GENDER	1.5660	.5004	53
ESTEEM	58.2642	11.8519	53
INT. MOTIVATION	12.1698	3.4459	53

Table 2

Pearson Correlations (N =53)

VARIABLES	**AVERAGE**	**GENDER**	**ESTEEM**	**INTRINSIC MOTIVATION**
ACHIEVEMENT	1.00	-.011	.078	.304 *
GENDER	- .011	1.00	.036	.066
ESTEEM	.078	.036	1.00	.185
INT. MOT.	.304 *	.066	.185	1.00

* Significant, $p< .05$

As the modern society has become increasingly dependent upon technology, science, and research, mathematics has become critical in the preparation of students for future careers and for the security and progress of the nation (Tapia & Marsh, 2000). In order to appropriately prepare these students, educators must be aware of what affects mathematics achievement and foster it. Relationships with teachers have direct significance for adaptive functioning in school and for self-esteem in early adolescence (Ryan, Stiller, & Lynch, 1994). Previous studies have suggested that intrinsic motivation, self-esteem, and gender affect achievement in mathematics. However, the present research suggests that intrinsic motivation is the only factor out of those mentioned that is significantly correlated to mathematics achievement.

Surprisingly, gender was not significantly correlated to mathematics achievement. This shows that females are moving up and proving that they are equal to males in various realms. Females felt isolated from the mathematics world for years, partly because they were told that they could not compete with males. Now that research has shown that gender is not significantly related to academic achievement, educators should work to build the self-esteem of females and encourage them to participate in mathematics.

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The Use of Pre-Reading Strategies to Teach Reading in Secondary Level Spanish Classes

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Introduction

In order to learn a foreign language, students must utilize listening, speaking, reading, writing and knowledge of culture as five interdependent skills. These skills are integral to the process of comprehending the language and the culture that is imbedded in language experiences. Although there is much research about listening, speaking and writing in a foreign language, this research project focuses primarily on reading. In the past, foreign language educators were not aware of the importance of the active interpretive processes involved in learning to read and write. They often assumed that comprehension in the foreign language would occur on its own or that native language strategies would automatically transfer to the foreign language. More recently, the profession has recognized that in order for students to be able to comprehend a reading passage, it is necessary to teach them how to use specific interpretation strategies. That is, simply exposing learners to written and oral input is not a sufficient means of guiding students to comprehension (Shrum & Glisan, 2000). In 1998, the *ACTFL Performance Guidelines for K-12 Learners*(ACTFL, 1998) were designed to measure language use and to act as benchmarks of learning and development along the K-12 continuum. These *Guidelines* aid teachers in the creation of lessons, which include the aforementioned skills.

Teaching reading comprehension requires specific teaching strategies so that students are not merely decoding, but they are also gaining the benefit of cultural awareness by reading culturally authentic texts. Hadley (1993) mentions the dual benefit of reading, first as a source of comprehensible input and also as a provider of cultural insights and understanding. According to Shrum and Glisan (2000), the foreign language learner may be able to read a text out loud without comprehending what s/he has decoded. For adult learners in foreign language, literacy may lead to improved orality because of the exposure to new words, phrases and ideas. For that reason, teaching strategies must be designed for reading comprehension in the foreign language.

Marva Barnett (1988) shows that reading comprehension in the foreign language is attained through a carefully designed instructional process and that teachers should plan lessons that actively engage students. This process involves the stages of pre-reading, while-reading, post-reading and follow-up. The pre-reading stage prepares the student for what s/he is about to read by activating the student's schema, which entails the discussion of background knowledge and main ideas of the text. The while-reading stage includes activities or questions that are to be answered while students read and are designed to keep students focused on the reading and searching for specific information. Post-reading activities are usually comprehension-based activities or discussions that assess students' comprehension of the reading. Follow-up activities extend the student's knowledge from the reading process to the application of language for a different communication purpose. While all stages are important in the reading process, pre-reading is very necessary in order for the students to complete the next three stages and comprehend the reading selection.

Review of Literature

Foreign language instructors are faced with the task of careful selection of reading passages and the planning of activities in order to teach reading. They should keep in mind that there are several strategies and questioning techniques that can be used to teach reading comprehension and that it is necessary to activate a student's schema, as well as to teach reading for meaning instead of simply translating. Research by Omaggio (1986), Shrum and Glisan (2000), and Babcock (1985), provides information that assists teachers in planning reading as a part of the curriculum. Shrum and Glisan (2000) believe that using authentic materials establishes meaningful context and reflects real-world culture. Furthermore, Omaggio (1986) encourages the use of authentic texts with unmodified authentic discourse. This applies not only to the actual text, but also to its form. For example, a newspaper article with a title and photographs should remain in tact because they serve as nonlinguistic clues for the reader. Omaggio (1986) states that some authentic texts combine a " random assortment of vocabulary, structures, functions, content, situations, and lengths, so teachers might want to consider using a blend of pedagogy such as prepared reading materials, and simulated authentic discourse" (p. 152). Simulated authentic discourse exhibits features with a high probability of occurrence in genuine reading passages that were created for the purpose of teaching reading.

According to Babcock (1985), the selection of texts should be meaningful to the students, and teachers should not ask students to read passages that the teachers would not read themselves. When choosing meaningful texts, teachers should consider the purpose of the reading. For example, teachers may assign a reading passage to students for their reading pleasure, to understand the gist, or to retrieve specific information. Teachers should also take into consideration the length, the level of language, and the theme or content when choosing a text. All of these factors determine the level of difficulty the students will have in comprehending the text. Researchers also recommend the use of appropriate activities that aid in comprehension throughout the entire reading process.

Teaching reading comprehension is challenging, but it is not an impossible task. It is important to remember that it is a process and that there are approaches and strategies available to assist foreign language teachers. The purpose of this study is to investigate specific pre-reading strategies that selected high school Spanish teachers use to prepare students to comprehend reading selections in Spanish. What criteria do teachers use to choose the reading selections for their classes? Do they provide several pre-reading activities that will lead to comprehension of the reading selection? And finally, do they structure lessons around the *ACTFL Performance Guidelines for K-12 Learners* (ACTFL, 1998).

Methodology

In this study, thirty high school Spanish teachers in a school district in the southeastern United States each received a consent form and questionnaire to determine pre-reading strategies used in his/ her classroom. The researcher delivered surveys and consent forms to each of the Spanish teacher's mailboxes at the school. All information gathered from the subjects was kept confidential, and no individual names were revealed in the analysis.

The results of the surveys were reviewed to determine what types of pre-reading strategies teachers use for teaching reading in Spanish as well as what types of reading selections are used and how comprehension is assessed. The information gained through the questionnaires and the interviews were also reviewed for trends in the current teaching practices.

Results and Conclusions

It is evident from the research that reading passages are being used in high school Spanish instruction at every level, but not necessarily by every teacher. The majority of the teachers surveyed include pre-reading activities to prepare the students for reading passages. By focusing on the preparation of the reading process, teachers demonstrate an understanding that reading is an interactive process, that it is important to consider individual needs of the readers and to focus instruction on activation of schema. Not only do teachers surveyed include pre-reading activities, but they also use post-reading comprehension activities and follow-up activities.

The teachers surveyed gave examples of criteria for selecting reading passages that support current research such as the level of language, cultural authenticity, length of text, and the appropriateness of topic. The surveys showed that foreign language teachers thoroughly plan reading instruction by choosing appropriate texts for their students. However, one of the teachers surveyed does not include reading in his/her instruction.

Finally, the majority of the teachers surveyed are aware of the *ACTFL Performance Guidelines for K-12 Learners* (ACTFL, 1998). However, when asked to give examples of the specific modes of communication in the *Guidelines,* some of the examples stated did not apply to the modes of communication. Several of the teachers in this study were not familiar with the *Guidelines*, or did no understand the terminology and therefore could not say if they included them in their instruction. However, the foreign language teachers in this study who stated that they did understand and use the *Guidelines* were very knowledgeable in their examples of how they incorporate them into the classroom.

It is evident from this study, that although the reading process is arduous, in that it requires careful and thoughtful planning, it is necessary to teach in this way in order for students to gain better communication skills. Pre-reading activities are critical because they prepare the student and set the rest of the reading in motion. Overtime, it can have tremendous benefits for the learner because reading is an integral part of the process that leads to a higher level of proficiency in development of all L2 language skills.

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Does Parental Involvement Affect Student Achievement?

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Introduction

Many researchers have studied the role of families in the development of a child's intelligence, social competence, and achievement. Smith and Hausafus (1998) showed that parental involvement in students' academic lives has significant affect on student achievement. The goal of this study was to examine the ways in which parental involvement affects students' academic achievement in science. Joyce Epstein reported, "The evidence is clear that parental [involvement], activities, and interest at home and participation in schools and classrooms affect children's achievement…"(p.120, 1987). Therefore, it is necessary to study the ways in which parental involvement affects students' academic success.

Review of Literature

Parental involvement is a broad concept including various activities such as reading, spending quality time with a child, and being involved in school organizations (Taylor et al., 1995). It also includes talking to a child about what he/she is learning, checking his/her homework to make sure it is done properly, and attending parent/teacher conferences (Smith & Hausafus, 1998). Snodgrass (1991) studied the impact of parental involvement on the academic achievement of primary and secondary students. In his conclusion, Snodgrass reported that a positive home environment and a strong parent-child relationship are critical determinants of student's education success (Snodgrass, 1991).

Epstein (1987) found that there are four types of parent involvement: basic obligations of parents, school-to-home communications, parent involvement at the school, and parent involvement in learning activities at home. Type one of parental involvement, also known as basic obligations of parents, includes providing food, clothing, and shelter for a child (Epstein, 1987). The second type of parental involvement examines school-to-home communications. Epstein (1987) believes that parents need to show interest in the information that their child brings home from school. Type three encompasses parental involvement at the school. Some examples of this include assisting teachers and students with lessons, field trips, and class parties; assisting administrators, teachers, and staff in the cafeteria, library, and computer labs; and assisting other parents with fund-raising, community relations, and program development (Epstein, 1987). Finally, type four is parent involvement in learning activities at home. Epstein (1987) discussed how parents have a responsibility in the home to develop a child's social and personal skills, as well as contribute to their basic and advanced educational skills.

The purpose of this study is to examine the ways in which parents' are involved in their students' academic lives and to determine whether or not parental involvement significantly affects student achievement. This study will also look for discrepancies between parent survey scores and student survey scores. Lastly, this will study examine parent and student perceptions about the level of parental involvement in their home. The hypotheses for this research are:

Null Hypothesis #1: Parental involvement will not have a significant affect on student achievement in the science classroom.

Null Hypothesis #2: Parents' perception of their involvement will not be higher than their child's perception of their involvement.

Null Hypothesis #3: Students will think that parental involvement has no affect on their achievement.

Methodology

The subjects were 935 students who attended a public high school in central North Carolina. This study worked with six science teachers and their classes, which included 21 honors and 9 standard classes. The study began by giving the six cooperating teachers detailed instructions, which explained their responsibilities. After this, teachers gave a combined parent survey and a parent consent form to each student. Students were asked to take these home, have one or both of their parents fill them out, and return them to their teacher in class the following day. Teachers motivated their students to return these forms by offering them a reward if the parent survey/consent forms were filled out and brought back to class, whether they agreed to participate in the study or not. Teachers continued to collect parent surveys/consent forms for a week.

Once students returned their parent surveys and consent forms, the student survey was given to each pupil who received permission to participate in the study. Then the cooperating teachers assigned students an ID number in order to ensure anonymity. They also supplied student quarter grades to the researcher in order to measure achievement. Student surveys were collected and the data was analyzed using the technology software, SPSS.

After the student surveys were collected, a diverse group of 40 students were chosen to be interviewed. The number of students interviewed was calculated by interviewing 10% of each teacher's total number of students participating in the study. The interviews were conducted in the school media center and they lasted approximately 15 minutes. During the interview, students were asked to answer five questions regarding parental involvement.

Results and Discussion

The Factorial ANOVA test was run using the SPSS software, in order to analyze the relationships between the dependent (achievement) and independent variables (parental involvement, course level, gender, and grade level). Grade level was the only independent variable to have a significant affect on student achievement in all thirty classes. The p-value of grade level was 0.001. However, the interaction between parental involvement and gender had a significant affect on achievement amongst the biology classes with a p-value of 0.029.

The Paired Samples T-test was run to examine differences between two paired groups that have the same dependent variable. The groups tested were parent survey scores and student survey scores within each family. This test showed that parent and student survey scores on average were significantly different with a p-value of 0.0001. Table 1 displays this significance value and the mean scores for the parent and student surveys. The parental involvement survey was evaluated in three groups

Table 1

Paired Samples Statistics

Survey	Mean	Std. Deviation
Parent	31.147	5.835
Student	28.816	5.336

Paired Samples T-Test

	df	Sig. (2-tailed)
Parent & Student	374	0.0001

(low, medium, high). A rating of "low" involvement was given to scores ranging from 15-25, a rating of "medium" involvement was associated with scores ranging from 26-35 and a rating of "high" involvement was given to scores ranging from 35-45. Although parent and student mean scores both received a rating of "medium" involvement, this paired samples T-test showed that their scores were significantly different. Furthermore, qualitative data was obtained through personal student interviews. These interviews were a means of collecting direct feedback from students about parental involvement. Results indicated that most students think parental involvement would help them academically, however the majority of students interviewed did not want their parents to be more involved in their school life.

In conclusion, grade level was the only independent variable to have a significant affect on student achievement. Perhaps this lack of significant difference was due to the complexity of this variable. This study also showed that parent survey scores were on average higher than student survey scores. Perception may have been the primary difference contributing to this difference.

Possible sources of error found in this study include inaccurate survey data as a result of students filling out their parent's survey and participant guessing. These sources of error demonstrate the need to further study the area of parental involvement. One future suggestion is to redo this study using a larger sample size that would consist of more eleventh and twelfth graders, in order to add more depth and diversity to the study. In addition, it is important to gain more standard participation while examining parental involvement because quite often these students have a greater need for this type of involvement than honors students.

Although this study did not indicate that parental involvement affects student achievement, it did however infer that parent perceptions of parental involvement greatly differ from that of students'. This finding is important for educators to know while talking and conferencing with parents. More so, this study demonstrated that there are many outside factors affecting student achievement. Learning about these factors will help teachers understand why some students achieve better than others. With this knowledge, teachers can strive to create learning environments that are conducive to a broad spectrum of student needs, as well as an environment that promotes academic success.

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Does Gender Grouping Affect Science Achievement in Rotating and Stationary Labs?

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Introduction

In science education today there exists a large gap between the achievement of males and females. Nowhere is this gap more transparent, than within the laboratory setting. It is here, that males are observed to dominate activities and relegate females to stereotypical roles of recorders. This research is designed to analyze the effect that placing students within a single-gender grouping has on student achievement in the two most common types of labs: rotating and stationary.

Review of Literature

The differences between males and females within the academic setting are no more visible than within the science classroom. From an early age, male and female science achievement tends to diverge with males favoring physical sciences and females favoring life sciences (Jones, 2000). This divergence may be due to the fact that the extracurricular activities preferred by males are those that include manipulation of tools, while female activities do not incorporate this element. This difference between extracurricular activities does not imply that females do not desire to use tools; rather it suggests that their opportunities to do so may be limited.

In searching for ways to equalize male and female experiences in science, it is important to understand and observe the way that each gender chooses to communicate both with those of the same gender and those of differing gender. During research conducted by Jones (2000), observation of male and female conversations among partners found key differences between the two styles adopted by men and women. In general, males within the classroom tended to adopt an individual-centered language while females, on the other hand, were found to use group centered language in an attempt to incorporate both partners into the learning process (Jones, 2000).

Recent attempts to restructure the very nature of education within the classroom have led to new reforms and new standards being placed on both teachers and students. One such reform is the movement towards critical and higher order thinking skills at the expense of traditional instill and drill methods. Laboratory activities have been offered as a way in recent years to foster both conceptual learning and creative problem solving, both higher order thinking skills. In laboratory activities students' performances on knowledge assessments were found to increase significantly when compared to peers in a traditional classroom. In a study of three different teaching styles, laboratory inquiry, critical thinking and teacher centered instruction, Von Secker (1999) found that those teachers who adopted a laboratory inquiry style had students who outperformed all others on a general science achievement test.

Despite the proven benefits of adopting a laboratory or small group focus in the classroom, there still remains a great deal of problems especially with the issue of role assignment. Guzetti (1996) found during her study of two different classrooms using either a lecture or lab format, that females were less likely to be involved in lab activities and tended to become subordinate to their male peers. In addition, lab roles were found to be assigned along stereotypical gender lines with females being assigned writing tasks and males being placed in charge of handling the actual equipment (Guzetti, 1996).

Methodology

This study was conducted in the classroom of one teacher in a middle-sized high school in central North Carolina. All five classes taught by this teacher were used for this study. The classes observed included three honors Biology and two regular Biology.

In order to study the effects of gender grouping, students were purposefully placed into either single-gender or mixed-gender lab groups for the duration of two lab activities. For the first lab activity, students were administered a pre-test prior to beginning the lab. In an attempt to ensure anonymity, students were not asked to place any identifying markers on the test other than gender. Tests were labeled with differing icons for the purpose of anonymous data analysis. The first lab activity completed by students during week one was titled, "An Examination of Bacteria and Fungi." For this lab activity, six stations were set up throughout the classroom. The movement throughout the room incorporated within this lab, was sufficient enough to label this type of lab as rotating. Students were given approximately twenty minutes at each station to complete that station's task. Station tasks included identification of bacteria species with microscopes, bacterial cell labeling, gram staining, reproduction analysis, and case study analysis (Appendix A). After completing the lab, on the following day, a post-test was given to all students, again containing the anonymous star markings and an additional random number. The number found at the top of the post-test correlated to an assigned number for the student in the teacher's grade book. The purpose of such a numbering system was so the teacher would be able to award grades to students without the researcher knowing the identity of any of the students. The post-test counted as ten percent of the student's quarter lab grade.

The second laboratory activity students were asked to complete as part of the normal educational curriculum followed one week after the bacterial lab. The second lab was titled "An Examination of Owl Pellets" and followed a traditional stationary laboratory setting. For this lab students retained their previous groupings and completed the entire activity at one lab table. A pre-test was given at the beginning of the lab and as before contained only an anonymous colored marking at the top of the page. To begin this lab, students were given the task of identifying which section of the country their owl belonged in (Appendix B). To answer this question, students were given skeletal bones, charts, and pellets taken from their owl to be used in diet analysis. In addition, students were also expected to use microscopes and various weighing instruments located within the classroom to fully dissect and analyze the pellets they were given. As with the first lab activity, a post-test was given to all students upon completion of this lab again containing anonymous colored markings as well as a random number. At the bottom of the post-test for this lab activity was a small, seven question attitude survey. Validity and reliability of this attitude survey were checked by a trial run with five graduate students. Upon completion of both lab activities, ten students were randomly selected for an interview (Appendix C).

Results

Pre-test scores were analyzed using a T-test for Independence to prove that all groups were equal before beginning the study. Post-tests from the bacteria and fungi lab, as well as the owl lab were graded by the researcher. A Factorial ANOVA analysis was done with both sets of student scores along with their gender and grouping style to determine whether either factor played a significant role in student achievement. Results from each of the student groups are indicated in Table 1.1.

Table 1.1
Mean post-test scores for rotating and stationary lab

Grouping Style	*Gender*	*Rotating Mean*	*Stationary Mean*
Single-gender	Male	84.52	88.8636
Single-gender	Female	88.3714	91.6190
Mixed-gender	Male	83.0682	85.8200
Mixed-gender	Female	73.2586	92.2609

Upon comparison of the means in the rotating lab, no significance was found with respect to gender. However, grouping style and the interaction between gender and grouping style were both analyzed and found to be highly significant (Table 1.2) which suggests that the type of group students were in did play a significant role in determining their score. For the stationary lab, neither gender nor grouping style, nor the interaction between the two played a significant role. Table 1.2 shows the significance values obtained.

Table 1.2
Factorial ANOVA results on significance of variables

Variable	*Significance (Rotating)*	*Significance (Stationary)*
Group	0.003	0.674
Gender	0.283	0.109
Group * Gender	0.015	0.519

Upon completion of the final post-test, students were given an attitude survey containing seven questions with Likert scales. Students were asked to place their gender in the top right corner of the test for the purpose of analysis between males and females. Short, informal interviews were conducted in the classroom during the course of the owl pellet lab. A total of twelve interviews were conducted to represent ten percent of the total data (n = 111).

Conclusions

In the bacteria and fungi lab, a significant difference in achievement was found between those in a single-gender grouping style and those in a mixed-gender grouping style. This study was able to conclusively find that females in a single-gender laboratory grouping performed significantly better than their peers in a mixed-gender grouping. These results may be due to the fact that during the course of the bacteria and fungi lab, it was noted both by the researcher and the cooperating teacher the propensity for males in a mixed-gender group to control the use of equipment such as microscopes and slides. For females in a single-gender group, though, it was noted that all females tended to use the microscope and view the material for themselves. A cooperative effort was noted in the single-gender females to make sure that all had an equal chance to view each slide before moving on. In mixed-gender groups, it was also noted that females tended to be relegated to stereotypical tasks such as writing down notes or copying tables rather than actually interacting with the materials and preparing and examining slides. Males, however, were assigned to stereotypical roles of leaders or experimenters.

These results are different from the stationary lab which found students in both single-gender and mixed-gender groups to use the equipment equally. Females in the mixed-gender groups were found to be equally likely to dissect the pellets as the males within their groups. Both sexes were observed taking part in the dissection of the pellets, and both sexes were equally likely to use all of the equipment available.

The findings from this research on the achievement of students in various gender-groupings during a rotating lab have many educational implications not only because of the results for females, but also because of the results for males. Males in a single-gender laboratory group performed at approximately the same level as males within a mixed-gender laboratory group. This finding is significant because it shows that male achievement was not sacrificed to increase female achievement. The fact that males were able to perform equally well in both grouping styles gives merit to the use of single-gender grouping for rotating labs within the science classroom.

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The Selection and Implementation of Authentic Literature in the Foreign Language Program

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Introduction

The recent emphasis on content-enriched instruction in early foreign language (FL) learning is having a significant impact on the design of the FL curriculum. The elementary and middle school curriculum now resembles a fusion of curricular agendas as FL specialists move away from the methods of teaching language through isolated skill development and the use of rote drill and practice. Researchers and practitioners have clearly identified the importance of using language in meaningful contexts as a means to help students attain a high level of proficiency (Curtain & Martínez, 1990). Thus, teachers of FL are now in a unique position to guide students' progress toward oral and literacy proficiency goals in the FL. They can achieve this through creative integration of the general elementary curriculum into the FL program.

Authentic literature is an invaluable resource in the FL program and creates a rich context for language learning and exposure to the target culture (Haas, 1992). Authentic children's literature includes stories, songs, poems, and plays that are indigenous to the target culture and language and that are not merely translations from English. There are multidimensional benefits that stem from the strategical selection and implementation of authentic literature in the FL program. Authentic materials are a resource for cultural information and provide opportunities for the learner to share in cultural experiences that are very similar to those of a child growing up in the target culture (Curtain & Pesola, 1994). Authentic literature is very effective when integrated as part of a content-enriched instructional unit. Many times, the unit is based on a theme, in which several subject area concepts such as math, science, and social studies are covered over a substantial period of time. When an authentic text with carefully planned FL outcomes is used as the focal point of a content-enriched instructional unit, the instruction expands students' proficiency in the FL while reinforcing skills that are part of the traditional curriculum (Schinke-Llano, 1985).

Within the scope of education's ultimate goal to provide students with a thorough and holistic learning experience, the FL program has taken on a central role in this movement. Clearly, the careful selection and implementation of authentic literature within the FL program becomes a critical means by which teachers can move students toward oral and literacy proficiency and model contextualized learning using various aspects of the traditional curriculum.

Review of Literature

The ability to read is a fundamental part of lifelong learning and success both inside and outside the classroom. From the moment that students enter elementary school, the concentrated effort begins to move these young emergent readers toward reading proficiency in their first language (L1). Big books, magazines, labeled bulletin boards, rhymes, and books with word patterns are just some of the resources that are found in the early elementary classroom to guide students toward literacy. No longer viewed as a fragmented attempt at skill development, the process of emergent literacy espouses the unification of oral language and experiences as the thrust for proficiency in reading and writing. Donoghue (2001) asserts that oral language precedes literacy in the L1 and that the process of learning to speak should in no way be separated from the subsequent process of learning to read.

Boyer (1996) asserts the language wholeness connection through which communication skills reinforce each other. As part of this connection, true literacy means that the learner is proficient in reading, writing, and oral communication and understands how these are intertwined. These assertions and connections give great insight into the FL curriculum in the early grades, although the expectations for the development of oral and literacy proficiency in the FL are very distinctive from those in the L1. The emergent process in the FL is much more challenging because social and cultural contexts and the creation of oral language experiences do not occur in students' daily interactions outside the FL classroom.

Krashen's (1985) Input Hypothesis states that one acquires language by understanding messages or by receiving comprehensible input appropriate to the stage of language development. He also asserts that the beginning FL learner must be provided with context to augment the comprehensibility of input. This contextualization supports FL acquisition in the absence of abundant oral and cultural language associations. Thus, in the quest for literacy and oral proficiency in a FL, there is the inherent necessity to expose students to a balanced perspective of culture and as many natural language instances as possible—all *within* the FL classroom.

Authentic literature provides FL opportunities that are rich in language, culture, and literacy experiences. Authentic literature encompasses any print material that is authentic to the target language (TL) and culture (TC). These are not English translations, but rather, were originally created in the TL and TC. Schofer (1990) contends that FL teachers are in a strong position to integrate literature into the core of FL teaching and that materials that are culturally authentic are most appropriate and effective for language learning. Crandall & Tucker (1990) recommend the adaptation of higher level material to make it maximally accessible to students with limited proficiency in the language of instruction. Information should be restructured so that relationships among ideas are clearer and the new vocabulary is sufficiently contextualized. Authentic literature has great potential as a resource in the FL curriculum that can be used in a variety of ways. Clipson-Boyles (1996) maintains that exposure to authentic literature allows students to learn about the language system and explore the diverse nature and structure of language. Authentic literature can readily be woven into the structure of a content-enriched FL instructional unit in which the curriculum design will draw on language objectives and concepts found in the elementary school curriculum (Met, 1989)

When integrating authentic literature into the FL curriculum, there should be deliberate, systematic planning and coordination of the language and content curricula to be covered (Snow, Met, & Genesee, 1989). Authentic literature in the FL curriculum is a teaching tool that can be used as a basis for interdisciplinary learning while supporting the general academic curriculum. Just as print functions in the curriculum for L1 acquisition, authentic materials in the FL are utilized to move students toward literacy and oral proficiency. The purpose of this research study is to determine how and for what purposes FL teachers select authentic literature to use in their FL programs and what strategies they employ to integrate these materials in their instruction.

Methodology

In order to determine how and why teachers select and implement authentic literature, the researcher followed two steps. First, the researcher interviewed eight teachers of Spanish and French in five elementary and three middle schools in a public school district and in two local independent schools in a southeastern city of the United States. The fourteen questions included in the interview were used to gather the teachers' reasons for using authentic literature, criteria for selection of literature, methods of implementation, and examples of the authentic literature used in instruction. Secondly, the researcher observed a class taught by each of the eight specialists in which authentic literature was part of the instructional plan. During the observations, the researcher looked for similarities and differences in pedagogy and for clear examples of the implementation of authentic literature.

Results and Conclusions

The ability level criterion proved to be the most important factor in the selection of authentic literature to be presented to the students. While two middle school and two elementary school teachers showed preference to choosing authentic literature that is exactly congruent with the students' ability level, two other elementary school teachers and one middle school teacher preferred literature that is a bit above the students' level of ability. In the case that any of the interviewed teachers did not choose literature that matched the capability of the students, they all expressed that they would adapt the material by summarizing it to enable student comprehension. The main reason indicated for using culturally authentic materials was for the foundation that they provide for the development of language and cultural awareness. Two middle school teachers also added that authentic materials contextualize cultural information and make the essence and life of the culture meaningful for students.

When asked how they implement literature into instruction, the majority said they present authentic literature to their students at a point in a unit when it relates to the topic and can enrich language concepts and cultural ideas that are being taught. Only three elementary school teachers indicated that they sometimes present literature as the focus of an integrated thematic unit that is taught over a significant amount of time. Overall, the teachers expressed a sentiment that both personal planning time and allotted instructional time were the deciding factors in the manner in which they were able to present authentic literature to their students.

From this study, the researcher concludes that the interviewed elementary and middle school FL teachers are selecting and implementing authentic literature materials as a supplement to reinforce FL teaching and as a foundation for cultural exposure. Unfortunately, the researcher discovered that adequate time was not available for the teachers to plan, instruct, and assess development of L2 proficiency thoroughly in the literature presentations.

The teachers interviewed in this study are implementing a resource that develops students' cultural perspectives and understanding with regard to the language that they are learning. Most importantly, FL specialists are selecting appropriate literature and are creating a plan of purpose that is both challenging for students and that holds expectations for FL outcomes as they strive to move their students toward proficiency.

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It's No Laughing Matter

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Introduction

People enjoy laughter. Research has shown that laughter exercises our hearts, relaxes muscles, lowers blood pressure and releases the body's natural endorphins. It amplifies respiration, increases oxygen exchange, and proves to have effects similar to those of athletic exercise. Laughter reduces anxiety and allows people to deal with stress more effectively. It helps people view the absurdities of life from a more objective standpoint and helps minimize the seriousness that surrounds them daily (McMahon, 1999, p. 70). Why then, are first year teachers encouraged "not to smile before Christmas?" Humor is a valuable teaching tool both in and outside of literature. "Learning to laugh with others and to laugh at ourselves enlivens the class, brings students and teachers together, and is often a great antidote for burnout" (McMahon, p. 70).

Teachers tend to use humor in the classroom for more than shear entertainment. They utilize a moment of humor and create a teachable moment. Teachers direct humor towards disruptive students to give guidance as well as alleviate the problem without taking disciplinary measures. Likewise they use puns, anecdotes, and wit to challenge students' vocabulary, broaden their point of view, or to force them to defend their own viewpoint. However not all teachers recognize the value in using humor as a tool. Many believe that humor is a very rudimentary method of teaching. The purpose of this study was to learn more about humor in the English classroom. How do teachers perceive themselves using humor in their classes? How often do teachers use various forms of humor as entertainment, a teaching tool, a form of discipline, or to establish rapport with students? And finally, is there a discrepancy between what the teacher perceives? and what is observed?

Review of Literature

Laughter is a part of life. The success of television sit-coms, movies, and pop fiction often depend on whether they portray the type of humor that will engage the masses in laughter. Laughter makes money and allows viewers to escape the realities of life. But contrary to the entertainment industry, the literature taught in many English classes is rarely comic in nature. However, while education is in fact a serious matter, life and learning do not always have to be serious:

> Learning can become more enjoyable and less stressful in a laughter-filled class. These attributes can be critically important for potential dropout, high-geared achiever, developmental student, and social non-participant. These students may have problems, such as fear of failure, dislike of "school," reduced self-concept, stress over grades, and incongruence between self and the instructor. The seriousness and intensity of the instructional lesson create tension and mental fatigue. Attentiveness fades and anxiety increases (Korobkin, 1988, p. 155).

Seeking laughter in literature is not the only way that humor serves as a teaching tool. Humor can also work to establish rapport between a class and teacher as well as among members of that class. Teachers with a sense of humor are sought out by students and parents "for their ability to set people at ease, equalize situations and status relationships, find unexpected connections and insights, and increase group rapport. Humor can be used to compliment, guide, or provide negative feedback while maintaining goodwill" (Korobkin, 1988, p. 154). Instructors with a sense of humor "broadcast a message that they can joke and be unafraid" of criticism thereby establishing an open classroom where de-constructive criticism has no place from student or teacher. "This willingness to be spontaneous and 'imperfect' enough to be able to laugh at self will better enable students to cope with self fears, reduce stereotyped perceptions of "school"…and foster a sharing and concerned attitude among all learning participants" (Korobkin, 1988, p. 155). Teachers need to be able to acknowledge the unpredictable-ness of life and laugh about it with their students. The sense of community that laughter brings to a classroom is invaluable.

Classroom humor can also be a useful device for controlling behavior in the classroom. Humor often allows teachers to address student behaviors that are not so flagrant to merit detention slips, but that are no less a nuisance: "humor has its roots in aggression. Since aggression permeates many work and learning environments through competition and stress, they are natural places where humor can diffuse difficult matter. Humor can relieve tension, make a point, and attract attention—all useful tools in…education" (Wallinger, 1997, p. 30). By defusing a tense situation, "it helps to bring problems back to a manageable size so those involved can more readily find solutions" (Wallinger, 1997, p. 30). Often by utilizing humor instead of harsh discipline, for first offenses or minor transgressions, students and parents are less likely to balk if further disciplinary action is required. Students want to be treated with the same respect as adults and often they respond well to good-natured ribbing.

Despite the strong arguments that support using humor in the classroom, there are types of humor that are unsuitable in a high school. As Korobkin (1988) argues, "just because a [teacher] uses jokes and gags, doesn't mean that the audience laughs or learns" (p. 156). However, one article adds that "people can tell jokes about a group that they belong to because, being insiders to the group, they have the right to criticize and the power to work for change. The same joke told by an outsider is more likely to contribute to stereotyping" (Nilson, 1999, p. 39). Most studies report "ridicule, satire, cynicism, and other forms of sharp 'put down' humor can be punishing and non-productive if they are used often or in the wrong way" (Korobkin, 1988, p. 156). However, contrary to several studies, which report the use of sarcasm as a negative type of humor, some state that the use of sarcasm and wit encourages students to think on a figurative level and prepares them for life outside of the classroom. A "moderate level of pain is [in humor] to serve as a contrast to the smile that follows….a kiss with salt on the lips, but a kiss nevertheless" (Nilsen, 1999, p. 39).

Although much has been written on the use of humor in the English classroom, I want to examine the various forms of humor and for what purpose humor is implemented in class. How often does a teacher crack a joke, use a pun, or utilize self-deprecating humor and for what reasons? Do students laugh at a teachers attempt at humor? Does the teacher laugh in class? And finally how do teachers perceive humor in their classrooms?

My study will look closely at the use of humor in the classroom and try to establish how often and for what reasons humor is used.

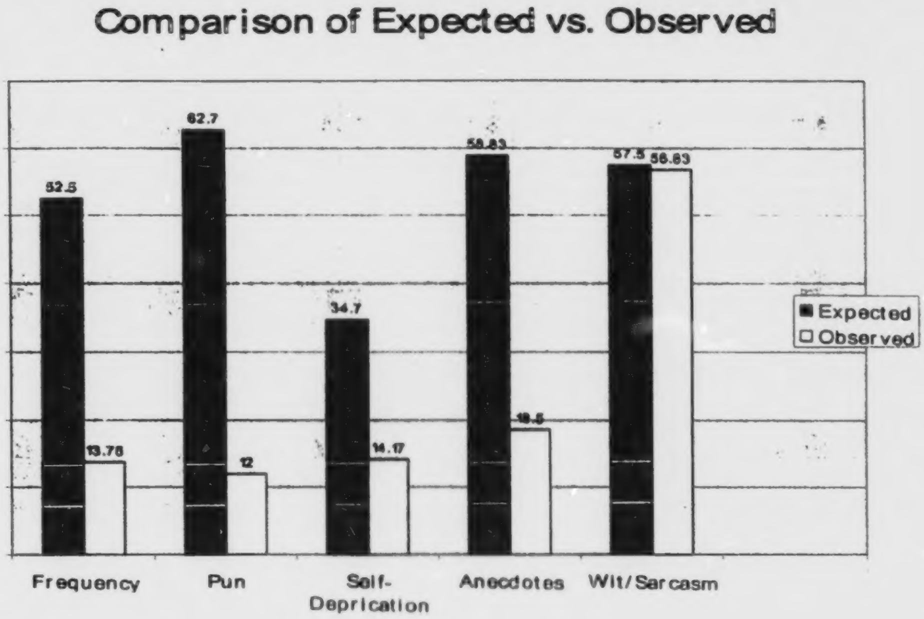
Methodology

Fifteen English teachers at West Forsyth High School were asked to participate in this study. Six teachers returned their consent forms and the researcher observed each of their classes approximately eight times. The researcher took field notes and observed the various forms of humor used and for what purpose. After observations were completed, questionnaires were distributed to each of the six teachers. The questionnaire dealt with the teacher's personal perception of how often he/she uses humor, and what type of humor he/she uses and how often. All information gathered from the subjects was kept confidential, and no individual names were revealed in the analysis.

The results of the observations and surveys were reviewed to determine what types of humor teachers use in the English class as well as for what purpose. The information gained through the questionnaires and the observations were reviewed for trends in the current teaching practices and for recommendations for utilizing humor in the high school English programs.

Discussion

It is evident from the study that teachers are utilizing humor in the classroom. The survey and the observations, however, show that there is a significant discrepancy between the teachers' perception of the various forms of humor being used in the classroom, for what purpose the humor is used and what is actually being utilized in the classroom (see chart below). Most of the teachers in the study felt they utilized lighter forms of humor (i.e. puns and anecdotes) a majority of the time when in actuality, the majority of the teachers demonstrated use of sarcasm and wit twice as often as the other forms. Five of the six teachers in the survey also claimed to use humor on average four to five times per class period. However, observations indicate that they use various forms of humor much more frequently. Although teachers do use humor within the classroom, this study shows that they are unaware of the types of humor they use as well as the purpose for which they use it.



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The Underlying Paradigms of ESL Among Social Studies Teachers

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Introduction

As the immigrant population in the Untied States rises, the number of English as a Second Language (ESL) students rises as well. Recent statistics show that one out of every six students in the United States comes from homes or neighborhoods where English is not the dominant language (Faltis & Wolfe, 1999). There are special ESL programs in most schools with an increasing ESL population, yet particularly at the secondary level, ESL students are often simply mainstreamed into regular classrooms. According to Fitzgerald (1995), 85% of ESL students are not involved in an ESL-specific curriculum and are mainstreamed the entire school day. The focus of this study is to investigate how social studies teachers modify their instruction to meet the needs of their mainstreamed ESL students.

Social studies teachers were interviewed in order to evaluate the different paradigms of ESL instruction in the regular classroom. The study attempts to describe and evaluate the tactics, resources, and support systems of their ESL teaching. By focusing on the discipline of social studies, this study describes what teaching methods and strategies social studies teachers in several urban and suburban high schools have implemented into their classroom specifically for their ESL students. The study focused on the teachers' opinions of how the atmosphere of the classroom may or may not have changed since the diversity of the classroom has broadened. Finally, once information was gathered from the teacher interviews, ESL teaching trends were grouped and compared to trends in pedagogy literature.

Literature Review

There is an extensive literature focusing on ESL instruction methods, the mainstreaming of ESL students, and the professional support and training that educators receive in preparation for instructing of ESL students. For example, common instructional advice for ESL instruction indicates that visual representations are important for teachers to incorporate into their classroom to aid ESL students-learning (Tang, 1992; Egbert & Simich-Dudgeon, 2001). ESL instructional methods particular to social studies involve various cultural influences the ESL students may provide to the classroom environment. Olmedo (1993) suggests incorporating oral history into the social studies classroom to provide the ESL students the opportunity to share family history and possible stories of immigration. McRae (1998) suggests a geography lesson focused on the significant establishments of the town or city to help familiarize the ESL student with the local community. Concrete exercises such as these are cited in the literature as beneficial.

Research on the mainstreaming of ESL students suggests an overall positive influence on the classroom environment. Harklau (1994) performed case studies on four ESL students and found their mainstreaming offered a rich linguistic learning environment with a better understanding of content areas than when they were in specialized ESL classes. Mainstreaming ESL students "provides the best (and only legitimate) avenue for students to acquire English language skills" (Young, 1996, p. 17).

Professional development and teacher education training research has described multiple views on ESL support and training. Some teachers have been dissatisfied with ESL inservice workshops (Clair, 1995). A quantitative study revealed a positive correlation between the amount of cultural diversity a teacher had experienced and his or her attitude toward ESL students (Youngs &Youngs, 2001). One case study found that mainstream teachers gain insight for their overall teaching by the integration ESL students into their classroom (Torres, 2001). Discovering the ESL students' literacy level in their native language is a key initial step that should be done in collaboration with ESL program or language proficiency tests (Fitzgerald, 1993).

As classrooms become increasingly diverse, teachers require a better understanding of how to meet the needs of the ESL students. "There is nowhere near enough understanding of how these students experience school and how schools and teachers respond to their presence" (Falits & Wolfe, 1999, p. 21). We need further research into ESL mainstreaming.

Methodology

Five social studies teachers from schools with the largest ESL populations in the Winston-Salem/Forsyth County School System were interviewed. In order to better understand the teachers' perception of ESL and modifications made in their social studies teaching, this descriptive, qualitative study used an open-ended interview to elicit, analyze, and describe their methods and the support systems of ESL instruction. The first section of the interview addressed ESL teaching strategies particular to English literacy skills and ESL social studies strategies. The second section explored the environment of the classroom due to mainstreaming. Once the data were collected, trends were analyzed and compared to ESL literature and research.

Data Analysis

The interview results were categorized into two sections. The first section analyzes various aspects of the teachers' ESL techniques. Within the first section the teachers' instructional techniques are analyzed by: 1) specific ESL teaching strategies, 2) origins of the techniques, 3) accountability of the ESL techniques, and 4) instructional techniques as a result of the ESL students' cultural diversity. The second section provides trends in: 1) how the success of the mainstreamed ESL students is gauged, and 2) the effect mainstreaming has on all of the students. A trend is defined in this research project by at least three teachers' responses that were in agreement.

Table 1: Interview Questions

1. Describe the teaching techniques you use with your ESL students specifically in reading, writing, listening, and speaking.
2. Where did you learn about these techniques? Were the techniques gained through trial and error, workshops, inservices, and/or other colleagues?
3. Do you find your teaching techniques for ESL students similar to your techniques with regular students, learning disability students, or gifted students?
4. How do state standards and accountability affect your ESL teaching methods?
5. What distinguishing techniques do you use within the various ESL ranges (defined by levels of English proficiency or differences in native languages)?
6. What effect does the broadening diversity of your classroom have on your teaching of all students?
7. Do you find your English-speaking students affected by the integration of ESL students?
8. How do you gauge the success of your ESL students, and what are you looking for to define success?

The specific ESL teaching techniques found were visual representations, oral accommodation, remediation techniques, and student-to-student interaction. The strongest trend suggested the use of visual aids for the ESL students' comprehension. The student-to-student interaction required students of varying ESL levels to pair-up and aid one another in their work. The teachers felt the student-to-student interaction benefited the overall success and comprehension of the ESL student.

The origins of the ESL techniques came from school workshops, teachers who specialize in ESL, mainstreamed teachers' educational background educational backgrounds, and techniques used for students with learning disabled students. The workshops were the vital source of their ESL techniques and all of the teachers provided positive opinions towards the workshops. All five teachers indicated that their own ESL teaching techniques were modifications of techniques used with learning disabled students.

Accountability of the ESL students and teachers to the school system caused the most concern among the social studies teachers. The state tests and end-of-course tests produced stress on the teachers. Specifically the amount of time they had to prepare their ESL students for the tests was perceived as insufficient. One teacher started an after school help session to specifically benefit her ESL students, while another teacher felt helpless when the ESL students had to take the end of course test.

A strong trend among the teachers was a positive perception of the diversity the ESL students provided to the social studies classroom and curriculum content. The ESL students provided personal accounts or family history using the ideas of immigration, naturalization, citizenship, and cultural diversity. The teachers felt the incorporation of the personal stories brought emotion into the classroom and fostered respect for one another among the students.

In terms of the students, only one trend emerged for gauging the ESL students' success. All teachers agreed they did not determine success through grades, but through the remediation process and metacognition. There were no dominant trends in the overall effect of the integration of ESL students on the English-speaking students. The teachers generally responded to the interview question as if the study were looking for negative effects on their classroom because of ESL mainstreaming. Three teachers felt there were no effects on the English-speaking students.

Discussion

The collaboration with the ESL program teachers and utilizing other social studies teachers as a support system was the favorable trend cited in the literature review on ESL pedagogy for regular curriculum teachers (Young, 1996). The literature generally views workshops negatively (Clair, 1995). In this study a rival trend was found. Teacher comments about ESL workshops were generally positive. Furthermore, incorporating the ESL students' diversity into the curriculum as a social studies teaching tool also followed the most positive themes suggested in the literature. The various personal histories, class discussions, and teachable moments that were revealed in the interviews suggest an infusion of diversity throughout all the students (McRae, 1998; Olmedo, 1993).

Overall, the positive remarks towards the mainstreaming process reflect general attitudes represented in the research. Mainstreaming provides a rich linguistic learning environment as well as exposure to a particular content area (Harklau, 1994). The variation in answers between individual teachers agrees with Penfield's (1987) research stating that open-ended interview questions provide flexibility and honest answers. While this research uncovered trends that were well represented in the literature review, many questions were also left to prompt further inquiry. Interviewing more teachers from different regions of the United States would be important to pursue in further research. Furthermore future studies should examine the topic of mainstreaming from the ESL students' point of view.

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Student Perceptions of Effective Teaching

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Introduction

For decades, the topic of students' perceptions of teachers, as expressed through evaluations, has provided great controversy and much fodder for debate. However, the absence of consensus does not negate the importance of gathering student feedback as a means of determining which characteristics and practices students value in a teacher. Grush and Costin (1975) state that students are, after all, the "consumers" and "clients" in the business of education: to whose needs and preferences might educators better tailor instructional practices? It seems only sensible, then, to determine what students perceive as effective, since it follows logically that students who enjoy learning will be attentive and engaged.

The major body of research on student evaluation was performed in the 1960s and 1970s and was conducted primarily on students' assessments of college professors. The purpose of this study, therefore, was to determine the nature of the teaching practices that students at the secondary level have experienced in social studies classrooms and to identify those deemed as engaging and effective methods of instruction. It was my hope to produce up-to-date results that pertain to social studies in secondary education, which could then be integrated into my own lesson plans in order to produce an engaging environment within my own classroom.

Review of Literature

Student evaluations have been a cause for debate among researchers and teachers for decades. In a review of research pertaining to the appropriateness of employing student evaluation, Aleamoni (1981) found that instructors have been concerned with the effects of external variables (i.e. class size, course level, sex of the student and of the instructor, etc.) upon student evaluations, as well as students' ability to make consistent judgments, students' qualification for making such judgments, and students' ability to discriminate between teacher excellence and teacher popularity.

While researchers recognize that student evaluations should by no means serve as primary determinants in faculty or coursework decisions, many studies have established the validity of student assessment of teacher effectiveness. Costin, Greenough, and Menges (1971) and Marsh, Fleiner, and Thomas (1975) found that student evaluations were reliable and valid tools for improving instructional quality. Grush and Costin (1975) and Marsh (1987) found students to be generally objective evaluators, and Marsh (1987) concluded that student evaluations are "reliable and stable" (p. 255). In addition, Marsh and Overall (1976) and Miller (1971) linked student achievement to student evaluations of instructional effectiveness, finding that scores on a common final exam were higher for students whose instructors had received feedback than for those whose instructors had not.

Once the validity and usefulness of student evaluations has been explored, the question next becomes: what *do* students perceive as effective teaching? Caplow, Wedman, and Wedman (1995) found that instructors' content knowledge, delivery, and ability to explain things clearly were ranked highly by students. Feldman (1976) found that students viewed stimulation of interest and clarity as the two most important aspects of effective teaching. Turley (1994) concluded that students most valued teacher warmth, caring, humor, and fairness as elements of effective teaching. Cooper and McIntyre (1994) found that both students and teachers felt that effective teaching is "transactional," in that it must occur along a continuum with varying emphases on student-focused and teacher-focused activities, and that the employment of a variety of activities and teaching strategies was an important aspect of effective teaching.

Methodology

This study was conducted as a series of qualitative interviews with students. Interviews, rather than surveys, were chosen as the method of gathering information from students so that student responses were not limited by the questions on the survey form.

Permission to conduct this study was obtained from the principals and selected teachers at the schools from which participants were selected. Consent forms were distributed to students and parents and were returned completed at the time of each interview.

In order to select participants, two teachers from high schools in the Winston-Salem area each recommended three moderate- to high-achieving senior students of both sexes for interviewing purposes. Interview questions consisted primarily of open-ended questions concerning students' perceptions of what makes a good teacher, an interesting classroom, and an effective learning experience. Interviews ran between fifteen and thirty minutes and were recorded on audiotape for later analysis. Upon completion of the six interviews, each recorded session was reviewed numerous times and students' descriptions of teachers and methods that they described as engaging and beneficial to their own learning experiences were transcribed. Transcribed responses were then analyzed in hard copy and reviewed for consistent themes.

Results and Discussion

Four general themes emerged from analysis of the transcribed responses:

1) Environment
2) Caring and Personality
3) Relation and Application
4) Activity Level

"Environment" relates to the atmosphere a teacher creates in his or her classroom; participants found that an effective teacher created an atmosphere that was challenging and interactive and in which they felt comfortable asking questions. Participants also felt that a "fun" environment—that is, one in which the teacher enjoyed joking with students, and students with teachers—was beneficial to their learning experiences.

"Caring and Personality" is the extent to which a teacher brings his or her personality into the classroom and displays an active interest in students' lives, academic progress, and well-being. These students found that effective teachers were those who were less authoritarian and more of a friend to students. In addition, participants defined "good" teachers as those who genuinely seemed to care about their students and were willing to work with students both in and outside of the classroom.

Participants also defined effective teachers as those who were able to make content relevant to students' lives, whether through "relation" to their own personal experiences or those of the students. Participants also found it useful when teachers would demonstrate the "application" of content matter to real-life situations.

Finally, participants felt that good teachers employ active ("hands-on") and interactive teaching methods, which these students find to be their most engaging and effective learning experiences. In particular, the students felt that they were learning when they were required to produce a dramatic interpretation or to compile a presentation to be made before the class.

While students were eager to describe the value of active learning experiences, they were perhaps more vehement in describing what they did *not* find to be effective or beneficial. Participants stated that neither monotone lectures during which they were required to "just sit," listen, or take notes, nor lists of "just facts" were beneficial. These students seemed to prefer a rich contextual background with fewer lists of names and dates, and more emphasis on events and the connections between them. Students did realize the importance of dates and chronology, but they did not feel that they were learning by memorizing a list of factual information or by answering questions from a textbook.

Aleamoni (1981) noted that faculty sometimes dismiss student evaluations as popularity contests; the results of this study, however, indicate that, in terms of effective instruction, students can provide insightful and discerning feedback on many issues besides teacher personality. This is not to say that teacher personality was irrelevant for these participants by any means, but that these students were also concerned with academic and pedagogic issues, including the academic environment and instructional practices employed by teachers.

While my results do not provide an exact parallel to any of the literature reviewed, it seems that my conclusions support the findings of those researchers who determined that students are acute and discerning observers whose evaluations offer valid suggestions for teacher improvement and for the creation of an effective learning environment (Grush & Costin, 1975; Marsh, 1987). In addition to providing support for much of the current educational theory which contends that student-centered teaching is effective and engaging, these students provided support for my belief that students who enjoy learning will be attentive and engaged.

It was interesting to me to note that five out of the six participants selected a teacher in the social sciences as his or her "best" teacher. Subjects represented by these teachers were world history, American history, geography, and political science; thus, the results become all the more applicable to social studies teaching at the secondary level. The implications of these findings for teachers are relatively simple: essentially, an effective teacher is one who cares for students, requires them to think and work for themselves, and listens to their input. By listening to students, in order to determine their needs, preferences, interests, and concerns, teachers may better understand what engages students and, thus, how they may create learning experiences that are valuable and successful for students.

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The First Five Minutes: A Study of Four Teachers' Use of Initial Teaching Moments

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Introduction

According to Madeline Hunter, "Time is the coin of teaching. That is what we have to spend to obtain learning" (Hunter, 1994, 155). For teachers and students alike, time **is** something that is invaluable, indeed almost monetary in nature, to both the teaching and learning processes. Time waits for no one; inevitably, the kids both arrive and leave when the bell rings. Obviously, then, researchers have asked multiple questions regarding the relationship between time and learning. How much is enough to spend? What is too much? These are important questions to ask. That which follows is a brief compilation of the research on time and its role in education.

Literature Review

"Since the beginning of compulsory public education in this country, educators and policymakers have debated how much time students should spend in school and how that time should be structured" (Aronson, 1995, 8). Thus, the topic of the relationship between time and learning is almost as old as the United States of America itself. Because of the industrialization of our society, a well-educated workforce has become a necessity to America (Aronson, 1995, 8). Thus, it comes as no surprise that "Throughout the 20th century, the amount of time invested by American students in formal education has been increasing" (Walberg, 1988, 80).

This topic of time in education has become even more popular over the past decade. This is obvious due to the development of the National Education Commission on Time and Learning (NECTL) through and by Public Law 102-62, which is more commonly referred to as The Educational Council Act of 1991. The commission was "charged with exploring the relationship between time and learning and making recommendations for how the nation's schools should restructure the use of time to enhance student learning" (Aronson, 1995, *iv*). The product of this commission was a report entitled Prisoners of Time in May 1994, which gives ideas of how to restructure time positively in U.S. schools as well as illustrates how other countries use time effectively in their own schools (Kane, 1994, 11). Since the U.S. government created a federal commission for the sole purpose of studying time, the topic of time in education must be fairly important to the American people. Other researchers think of it as a central issue too.

Most of the research that has been done on the topic of time deals with terms such as "engaged time" (also called "time-on-task"), "allocated time," "academic learning time," "non-instructional time," and "instructional time" (Zimmerman, 2001, 9). According to Zimmerman, research on the topic seems to show that "there is little or no relationship between allocated time and student achievement," "there is some relationship between engaged time and student achievement," and "there is a greater relationship between academic learning time and student achievement" (10).

Beyond these studies of the different divisions of time, there has been much less study into the beginning of class and, more specifically, the first five minutes. One researcher even goes as far to say that the beginnings and endings of class are not as important as the middle (Rouse, 1993, 147). Yet, Clough, Smasal, & Clough (1994) do mention that "on average, 2.5 minutes pass between the bell ringing and class beginning" (32). The 1994 study is not a descriptive study into what happens during the first five minutes. Studies such as this one, that is, studies that describe what this paper will refer to as the initial teaching moments (ITMs), are not prevalent. Hence, a need exists for studies like this one. Through such research, educators will be better able to know current beginning of class procedures as well as find ways to maximize their use of instructional time.

Methodology (Participants, Instruments, and Procedure)

Since the accessible population for this project was four English teachers at one high school in the Winston-Salem Forsyth County School System of North Carolina, the researcher observed each of these four teachers a total of ten (10) times per teacher to get the desired data for the project. Teachers will be referred to in the study as "Teacher A," "Teacher B," "Teacher C," and "Teacher D" in order to preserve anonymity.

The main instrument of data collection was note taking through observation. The researcher used a watch to record timed data. Moreover, the software *Micosoft Excel®* aided in the organizing of the data into the charts in the "Results and Data" Section.

During the first five minutes of each class period that was observed, the researcher timed—using a watch—exactly how long after the bell it took before instruction began, recorded the types of activities that occurred during these initial instructional moments, and divided these activities into three categories (Intructional, Social, and Administrative activities) for analysis. During the first five minutes, the researcher focused on each of the teachers' actions, their interactions with students, and—most importantly here—the time it took for activities to begin. The researcher also separated the first five minutes into the following time categories: Bell ringing—30 seconds, 30 seconds—1 minute, 1 minute—2 minutes, 2 minutes—3 minutes, 3 minutes—4 minutes, 4 minutes—5 minutes. During each of these blocks of time, the researcher was making notes as to what types of activities were happening in the classroom—administrative, social, and instructional. This data is in the full paper.

Results and Data

Before discussing the tables below, it will be important to define some of the terms used in the tables and in this paper. First, the phrase "start of instruction" refers to the moment in time when the teacher begins carrying out the main objective(s) for the class period. The researcher determined this moment by the words and actions of the teachers. Imperatives given by the teacher such as "Get out your notes from yesterday" or "Open your books to page 137" were examples of the "start of instruction." In general, then, "start of instruction" refers to the purposeful initial teaching moments (ITMs) in the classrooms. "First addressing/greeting the class" refers to the first spoken interaction between teacher and class. In the full paper, definitions of "Administrative," "Social," and "Instructional" are given. Below are the data (excluding Tables 3 and 4, which may be found in the full paper).

Table 1: Time Taken Before Start of Instruction

Teacher A		Teacher B		Teacher C		Teacher D	
Date	Time	Date	Time	Date	Time	Date	Time
9/7	2 min 5 sec	9/12	3 min 3 sec	9/12	2 min 33 sec	9/7	5 min 12 sec
9/25	3 min 3 sec	9/13	1 min 27 sec	9/25	4 min 50 sec	9/7	3 min 27 sec
10/8	10 sec	9/17	6 sec	10/10	2 min 30 sec	9/12	5 min 5 sec
10/18	4 min 53 sec	10/8	5 sec	10/18	1 min 37 sec	9/13	3 min
10/26	9 min	10/26	1 min 32 sec	10/26	7 sec	9/17	56 sec
10/26	3 min 18 sec	10/30	33 sec	10/26	2 min 37 sec	9/25	3 min 20 sec
10/26	3 min 10 sec	11/2	1 min 2 sec	11/2	1 min	10/10	3 min 32 sec
10/30	28 sec	11/15	25 sec	11/2	1 min 15 sec	10/26	5 min 57 sec
11/15	3 min 52 sec	11/27	4 min 36 sec	11/14	1 min 20 sec	11/14	5 min 20 sec
11/27	4 min 45 sec	12/3	45 sec	11/20	26 sec	12/5	5 min 21 sec
Total Minutes	**33 min 24 sec**		**12 min 14 sec**		**16 min 55 sec**		**39 min 50 sec**
Avg per Class	**3 min 32 sec**		**1 min 21 sec**		**2 min 6 sec**		**4 min 35 sec**

Table 2: Time Before First Greeting/Addressing the Class

Teacher A		Teacher B		Teacher C		Teacher D	
Date	Time	Date	Time	Date	Time	Date	Time
9/7	43 sec	9/12	9 sec	9/12	7 sec	9/7	45 sec
9/25	5 sec	9/13	35 sec	9/25	6 sec	9/7	52 sec
10/8	10 sec	9/17	6 sec	10/10	2 min	9/12	1 min 5 sec
10/18	5 sec	10/8	5 sec	10/18	5 sec	9/13	45 sec
10/26	20 sec	10/26	10 sec	10/26	7 sec	9/17	17 sec
10/26	35 sec	10/30	15 sec	10/26	15 sec	9/25	44 sec
10/26	15 sec	11/2	6 sec	11/2	30 sec	10/10	40 sec
10/30	10 sec	11/15	8 sec	11/2	20 sec	10/26	34 sec
11/15	25 sec	11/27	7 sec	11/14	7 sec	11/14	3 min 46 sec
11/27	15 sec	12/3	15 sec	11/20	4 sec	12/5	1 min 32 sec
Total Minutes	**2 min 23 sec**		**1 min 16 sec**		**3 min 1 sec**		**9 min**
Avg per class	**18 sec**		**12 sec**		**30 sec**		**1 min 26 sec**

Conclusions

Educators should learn some valuable lessons from the data collected in this project such as being more conscious about their use of initial classroom time. The findings of this research were similar to the findings of the M.P Clough study (1994) mentioned earlier in that in this study the average startup time of all the teachers together was 2 minutes 54 seconds (compared to the 2 minutes 30 seconds figure they found). Although the main object of this study was to determine how four teachers used the first five minutes of class, another aspect of the study was to define what effect, if any, the startup procedures of the teachers had on the lesson as a whole. These effects were determined through the note taking process. Teacher B often started instruction within the first minute of class, and—due to the quick startup—this teacher often accomplished many different, smaller tasks over the course of a period. Teacher D, though slowest in starting class, was able to accomplish at least one rather large objective during class. This teacher would lead a class discussion that lasted most of the class period, or allow students to work in groups for large amounts of time. Simply stated, this teacher's style was to do larger, comprehensive lessons rather than to accomplish smaller tasks.

Interestingly enough, Teacher A and Teacher C—the teachers that were closest to the overall average—were quite similar in the effect that their startup had on their lessons. Whereas Teacher B would accomplish multiple small tasks and Teacher D would concentrate on larger tasks, both Teacher A and Teacher C would often alternate between these smaller and larger tasks throughout the class. A small task, here, would refer to an activity that lasted below ten minutes, and a larger task would refer to anything lasting over ten minutes in time. In this way, both Teacher A and Teacher C were able to usually accomplish at least two small tasks and one large task in one 50-minute period. Thus, the main effect that the researcher noticed was in relation to the types of activities that the teachers chose to do in their classrooms.

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Comparison of an Advanced Writing Course On Line Versus On Campus Taught by the Same Instructor

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Introduction

One of the fastest growing forms of learning today is on line or web-based education. It is becoming very popular because of the pace that everyone leads. On line education is a two-sided coin with advantages as well as disadvantages when compared to regular instruction courses. Yet, even the demand for on line courses grows more and more every day. Most educational leaders believe that traditional instruction courses are thought of as the best means to earn a university diploma and worry about whether on line courses are accomplishing the goals required by the university curriculum and whether academic standards are being achieved with such modern modes of instruction? Finally, they are concerned about what type of teaching method is more effective regarding reliability and knowledge acquisition?

Review of Literature

The teaching and learning process is a relevant issue in the development of future generations. Computers are becoming the most useful tool for accomplishing this process. As students are facing limitations in aspects such as transportation, time and resources in general, the option to take courses on line has become a real opportunity of continuing education for them. Even though on line learning may facilitate learning, face to face interaction among teachers and students in the classroom could be more reliable and effective. According to Alan Brender's report: " Maryland Universities expect to have 70,000 to 80,000 on line students this year, with many of them from Tokyo, Japan and other cities in Asia" (2001). Educational institutions have become more aware of the possibilities involved in incorporating these types of distant learning opportunities, but they are also aware of a need to be sure that quality is not under mined. " Students' performance in the here and now of distance education courses is typically at the center of assessment of their effectiveness. If comparisons with students' performance in traditional classroom settings are to be made, they generally involve courses taken contemporaneously with the distance education courses" (Dominguez & Ridlye, 2001). The growing demand for on line instruction and consequently the comparison with in class instruction has created debates about which one is more effective and under what circumstances one these two methods should be compared.

The controversy that surrounds on line or regular in class courses is based on which method offers greater effectiveness, better pedagogy, lower cost, greater convenience and easier-to-use technology. These are some of the most argued ideas in every possible scenario. As cited in a study conducted by Carr (2001), Hedrickson, the association's higher-education coordinator and a contributor to the manual of the National Education Association says, " It seems to me that it is in everyone's interest to take a hard and realistic look at what the costs are going to be as people venture into distance education. In a section comparing the costs of on line and in-person courses, the last will always be less expensive than instruction via Internet."

Laura Helmuth (2000) focuses on the efforts of faculty members in regulating the incorporation of on line instruction into curriculums in her article "Pedagogy first technology later". She cites Professor David Noble of New York University who warns that on line courses are bound to be low-quality scams, digital diploma mills. He fears that distance learning is not about education; it's about money. That is just the surface of the controversy related to this topic. Every point of view is defended with the impressive evidences, and consequently the controversy does not seem to be resolved. The arguments on the drawbacks from both methods of teaching are the point of attention of several studies and still some specialists insist that this is merely a matter of personal preference.

Methodology

This study is an attempt to compare the effectiveness of two teaching methods, the traditional in class method and the on line instruction method. The study focuses on the course ENG 114 (Professional Research & Reporting) taught on line and in the classroom by the same instructor during the fall semester of 2001 at Davidson County Community College in North Carolina.

For this study two groups, one taking classes on line and the other taking regular classes where chosen. The same instructor taught the courses; they both had the same course description. Both classes were taught in the same educational institution, in this case Davidson County Community College. The group taking the course in the classroom met three days a week in the morning. The group taking the course on line followed the instructional stream of the course on any computer with Internet access.

An early writing sample was collected from ten students from each group at the beginning of the semester in order to determine their initial writing skills. A six-place rubric covering five criteria (content, organization, focus, style and conventions) was used. The early writing assignments from both on line and in-class course were evaluated in a blind reading to establish the starting point of the study. At end of semester the final writing assignment was collected, evaluated and compared with the first one in each group in terms of their gain scores. This evaluation was based on the " Pennsylvania State Assessment System Rubric" which establishes the parameters for assessment.

Both groups were given an attitude checklist in order to find out personal inclinations, their progress in the course, and the obstacles of learning during the semester. The attitude checklist had a multi-option answer box where they could choose as many options as they preferred.

Results and Conclusions

The ten early writing samples in both groups in a blind study were collected and evaluated. The writing scores in the on line group ranged from three to six with a mean score of 4.6 in the writing assessment test. In the in-class group scores ranged from three to five with a mean score of 4.

In the late writing sample collected by the end of the semester, the on line students scores ranged from four to six with a mean score of 5.0. The in-class students' scores ranged from four to six with a mean score of 5.2.

Table I- Mean scores per group

	Early Sample	*Late Sample*	*Gained Score*
On line group	4.6	5.0	.4
In class group	4.0	5.2	1.2

Note. The gained score represents the level of improvement of each group.

Results suggested that the in-class group gained one point two points after comparing the early and the late writing sample scores, while the on line gained point four. After comparing these two teaching methods, the analyses revealed that the in-class group gained point eight in the writing assessment over the on line course.

In the results of the attitude checklist the both groups responded to three basic questions:

1. **How would you evaluate your abilities as a writer before taking this course?**
2. **How much do you think this course will change your ability to communicate?**
3. **How do you evaluate your ability as a writer after taking this course?**

The results to the three questions and presented in the table below:

Table II- Attitude checklist responses

Question		*Excellent*	*Good*	*Average*	*Poor*
1	Online	0	40	50	10
	Inclass	0	36	54	0
2	Online	**Dramatically**	**A goodbit**	**A little bit**	**Not at all**
		10	60	20	10
	Inclass	7	71	10	12
3	Online	**Much better**	**Better**	**Slightlybetter**	**The same**
		20	60	20	0
	Inclass	29	50	14	7

The on line ENG 114 course offered by Davidson County Community College is a strong supplementary learning opportunity for many students. The regular or on campus class is and will be necessary for most students, especially those who are less independent in their learning styles. Based on the finding of this study there was a slight difference between the writing samples measured in favor of the in class course. The results of the self-report were mixed. I conclude nevertheless that on line education can be an effective teaching method, and that can fulfill our highest academic expectations. On the other hand on campus courses will still be needed for those who do not have computer access or do not respond to such distant kinds of learning.

Each teaching method has advantages and disadvantages. It is the students' responsibility to consider their necessities and possibilities to accomplish their goals. The choice for either on line or on campus courses is going to depend on which method students feel more familiar and comfortable with. This study provides only an initial step in examining the effectiveness of each method. We clearly need other studies to gain a more accurate and a greater understanding of this issue.

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Proximity, Touch, and Participation

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Introduction

Communication is an ongoing process of sending and receiving messages, which allows humans to share knowledge, thoughts, abilities, and emotions. Successful communication is the crux of effective teaching. Communication consists of verbal and nonverbal elements. Grant and Hennings (1971) found that as many as 82 percent of teacher messages are nonverbal, while only 18 percent are verbal. According to Smith (1979), "Whether teachers are talking or not, they are always communicating" (p. 633).

This study investigates the effect of two elements of nonverbal communication, teacher proximity and touch, on student participation in the classrooms of four veteran high school English teachers at one high school in the Winston-Salem/Forsyth County public school system. The hypothesis was that teachers who approached their students more would have higher levels of student participation in their classes.

Data was collected while observing the four teachers and their students. The teachers were two females and two males. The researcher charted when the teacher entered any of the following ranges in relation to a student: touch to 1.5 feet, 1.5 to 4 feet, or 4 to 12 feet. The researcher also kept a tally of how many students participated in the class period.

The data gained from the charting of teacher-student proximity and student participation allowed an analysis of the effect of teacher approach on student participation.

Review of Literature

It is important that teachers are aware of nonverbal communication in their classrooms. Miller (1988) writes that effective use of nonverbal communication will give teachers "the ability to send students positive signals that reinforce learning, and at the same time become more adept at avoiding negative signals that stifle learning" (p. 6). Two important elements of nonverbal communication are proxemics, a person's use and perception of space, and touch.

Hall (1959) defines proxemics as the study of man's use of space. Speaking of proxemics in regard to communication, he says, "Spatial changes give a tone to a communication, accent it, and at times even override the spoken word" (p. 160). Banbury and Hebert (1992) say that the amount of space people maintain between themselves and others gives information about relationships, regulates interactions, and affects the impressions that they develop about each other.

Hall (1966) developed four categories of personal space. Miller (1988) also addresses each of these categories. First, intimate distance ranges from physical contact to 18 inches. Miller describes this as "the zone reserved for close relationships, sharing, protecting, and comforting" (p. 21). Second, personal distance ranges from 18 inches to four feet. Miller says that within this range "informal conversations between friends occur" (p. 21). Third, social distance ranges from four to 12 feet. Miller says that this range is "generally acceptable for interaction between strangers, business acquaintances, and teachers and students" (p. 21). Fourth, public distance starts at 12 feet and reaches to infinity. It is this range that Miller says is "used for such one-way communication as exhibited by lecturers" (p. 21). Interestingly, French (1972) determined that in the average classroom teachers and students are separated by 12 feet or more, which falls in Hall's farthest category of personal space.

Though people do sometimes use close physical proximity to influence, intimidate or warn, Banbury and Hebert (1992) say that teachers and students tend to use closeness to signal acceptance, concern, and approval, and distance to indicate indifference, rejection, and disapproval. Past studies have shown that physical closeness affects the performance of students.

Human touch is generally thought of as a powerful and basic means of communication. Hall (1966) said, "Touch is the most personally experienced of all sensations. For many people life's most intimate moments are associated with the changing textures of the skin" (p. 59). Knapp (1972) called touch the most basic or primitive form of communication.

Cheney (1988) writes that touch can be viewed as giving encouragement, expressing affection, demonstrating acceptance, and showing emotional support. Yet it can also be used to communicate power and status. Research indicates that touch can be a powerful tool in the classroom.

While research has been done on proxemics and touch in the classroom, little of it investigates the effect that either has on secondary student performance, specifically on student participation. After examining the literature on this subject, the researcher was even more compelled to investigate this topic.

Methodology

Four English teachers, two male and two female, were chosen for this study from one high school in the Winston-Salem/Forsyth County public school system. In the analysis, neither the names of the teachers or students are revealed. Any references to the students or teachers are presented in an anonymous fashion (i.e. Student A, Student B or Teacher A, Teacher B).

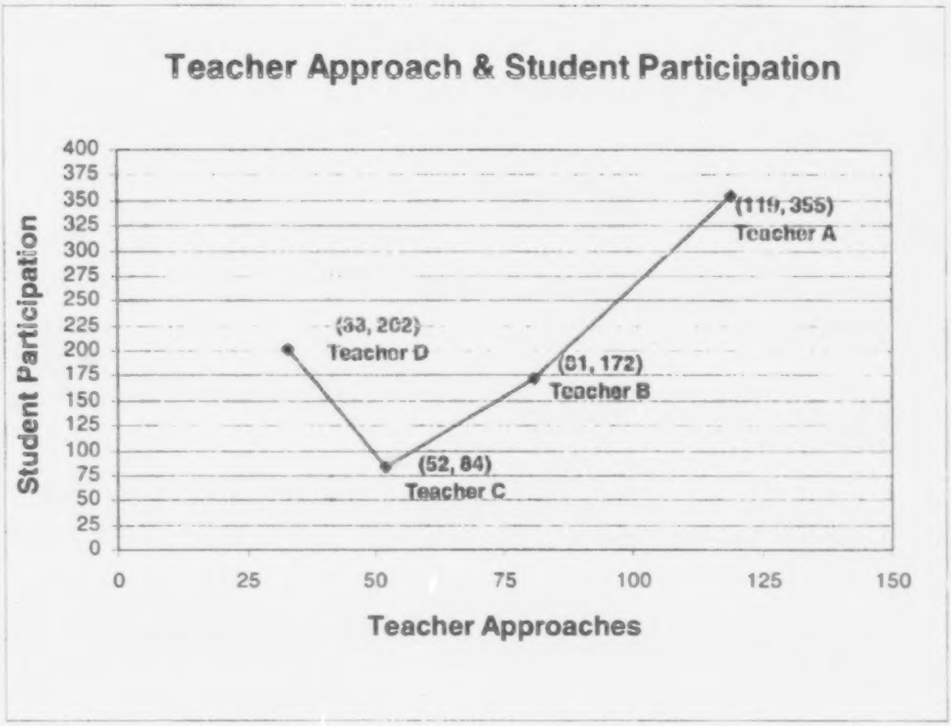
The researcher observed each teacher eight times over the course of approximately eight weeks. The researcher created a chart on which the teacher's behavior and student participation was recorded during class. Based on proximity ranges established by Hall's (1966) research, the researcher charted when a teacher entered any of the following ranges in relation to a student: intimate range: touch to 1.5 feet, personal range: 1.5 to 4 feet, or social range: 4 to 12 feet. The researcher also kept a tally of how many students participated in the class period.

The purpose of this study was to see if there was any relationship between teacher approach and student participation. Therefore, data analysis was accomplished by use of a correlation test with teacher approach as the independent variable and student participation as the dependent variable.

Results and Conclusions

The study's hypothesis that higher instances of teacher approach would yield higher levels of student participation did not prove to be significantly true. In a correlation test of the thirty-two teacher approaches and student participation pairs of data from all of the teachers, the significance level was 0.120. With alpha equaling 0.05, the significance level was greater than alpha.

However, when the totals of teacher approaches and student participation for each teacher are compared, the study's hypothesis holds true for Teachers A, B, and C. For these three teachers, as the number of teacher approaches increase, the student participation rises, as can be clearly seen in the graph below.



When this was observed, the researcher decided to run a correlation test on Teachers A, B, and C since Teacher D obviously does not fit into the hypothesis. When the twenty-four pairs of teacher approaches and student participation were correlated the significance level was 0.150. With alpha equaling 0.05, the significance level was greater than alpha. Therefore, teacher approach and student participation were still not significantly related. This does not mean that the variables are not related at all, however. As can been seen by the chart above, there is obviously some relation between teacher approach and student participation.

The failure of the hypothesis in this study shows that teaching in close proximity to students is not necessary to have high levels of student participation. Teacher D's results illustrate this well. In eight class periods, this teacher only approached 33 of his students, but he had 202 students participate. This is the second highest student participation rate of the four teachers, only falling behind the teacher who approached her students the most. Though Teacher D rarely leaves the front of the classroom, his relationship with his students is deep. He has a personal connection with his students that transcends physically approaching or touching them. This connection is of the mind and spirit and can only be fully sensed by watching him with his

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students. It is important to keep in mind that proximity and touch are only two aspects of communication. It is not essential that teachers teach in close proximity to or touch their students, only that they excel in the kind of communication that best fits their style and their teaching style.

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The Effectiveness of Global Versus Focal Questions in Secondary English Class Discussions

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Introduction

This research examined the effectiveness of global versus focal teacher questions in secondary English class discussions of literature. Global teacher questions are ones that the teacher poses about a literary work as a whole, and focal teacher questions ask about specific details of a work. The effectiveness of questions is, at best, difficult to measure; in this study effectiveness was measured primarily by the length of the students' responses to teacher questions, the level of insight in students' responses, and the number of student responses per teacher question. Of course, there are appropriate times to use both types of teacher questions in the classroom. This study by no means sought to suggest that one type of question should be used to the exclusion of the other. Rather, the study sought to find information as to which type of question tends to get longer and more insightful discussion going among more students.

Review of Literature

There are many different ways to classify the questions teachers ask in a whole-class discussion. Probably the most famous hierarchy that relates to questions is Bloom's; Benjamin Bloom published *Taxonomy of Educational Objectives: Handbook I: Cognitive Domain* (1956) in which he outlined six levels of student thinking: "knowledge, comprehension, application, analysis, synthesis, and evaluation" (18). Bloom's taxonomy is "hierarchical" in structure; that is, more complex student thinking is required at each successive level (Bloom, 1956, 18).

This research will divide questions in another way; questions teachers ask to promote classroom discussion will be categorized as either global or focal. A global question asks about a literary work as a whole (e.g. questions about titles or themes) while a focal question asks about specific details in a literary work (e.g. a word or an image). Gall (1984) states that, despite many available question taxonomies, researchers "usually simplify their data analyses by classifying all teacher questions into just two categories: fact and higher cognitive" (40).

Most of the research about the effectiveness of different types of teacher questions did indeed classify questions into those two categories of low- and high-order thinking – categories which are not directly translatable to the global/focal categories since, for example, a focal question could ask either for recall or for complex analysis. Nevertheless, it is valuable to consider what literature that classifies questions in a manner similar Bloom's taxonomy (low- versus high-level questions) has found. Sanders (1966) stresses that teachers need to have questions at both the low and high levels rather than thinking they should aim to only ask "high level questions" (169). Martin (1979) conducted a study in one classroom of sixth graders in which students who were questioned with lower- and then higher-level questions had responses higher up on Bloom's scale than did those students who received only low-level questions; nevertheless, scores on tests did not increase in the group exposed to higher-level questioning. When teachers used predominantly low-level questions with fifth and sixth graders studying social studies in research by Ryan (1973), students had "a low level mode of involvement and either rejected, or failed to perceive, any higher level response possibilities" (66). Students in the group who were asked more high-level questions along with lower-level questions had better factual and critical thinking at the end of the unit. Another study, however, concluded that "it seems that the relation between the questions asked at each cognitive level and the corresponding student answers obtained at each level is not a particularly strong one" (Mills, Rice, Berliner, Rosseau, 1980). Gall (1984) reviewed many studies regarding low- and high- level questioning and found quite disparate results. One study found that asking mostly low-level questions was most effective while another found that asking many high-level questions was. Some studies found the types of questions students were asked did not affect their achievement.

Some literature suggests that either higher-level or more global questions should appear early on in class discussions. Ferrara (1981) liked to open his Great Books discussions not with factual questions but with questions that asked for "interpretation" or "evaluation" (69). He writes about discussing Machiavelli's *The Prince* and gives an example of a good question with which to begin the discussion. It is a rather global question: “‘if you were Lorenzo and you read this book, what would you do about it? Would you take on Machiavelli as an advisor? Why or why not?’” (Ferrara, 1981, 69). McKeown & Beck (1999) offer suggestions for beginning discussions about texts: “Teachers must identify places in the text that are key to building an understanding of the focus and then develop questions that initiate a discussion of these ideas. Questions that focus on the authors’ ideas work better than questions that elicit facts and details. Talk that focuses on literal information is flat and static” (26). McKeown & Beck (1999) give examples of bad questions to begin with that are focal and good questions for beginning that are rather global. Christenbury & Kelly (1983) object to the rigors of “questioning hierarchies” that suggest a teacher move gradually up through the levels during discussion (4). They propose an alternative which consists of three overlapping circles representing the literary work, the student, and society (Christenbury & Kelly, 1983). They refer to “dense” questions, which could also be classified as global questions, and discuss when the teacher should use these questions (Christenbury & Kelly, 1983, 17).

Methodology

Subjects

The subjects of this research were four public high school English teachers (teaching grades nine through twelve) and their students (ranging in level from “regular” to “honors” to “seminar”).

Procedures

The researcher collected data by observing thirty class periods evenly divided between the four teachers. Observation took place during normal classroom instruction; the researcher did not attempt to change normal instruction in any way. Teachers were not told that the researcher was observing their questions. All questions during whole-class literature discussions were recorded as being either global or focal since the global and focal question categories pertain specifically to discussions of literature,. The student responses to each question were rated on length and depth. Length was recorded as either a “phrase/sentence” response or as a “longer” response (that is, longer than one sentence). Depth was scored as a 1, 2, or 3. A score of 3 indicated an insightful response while a score of 1 indicated a superficial one. Scores of 2 were given for student responses that were either moderately insightful or were simply correct factual recall responses. In addition, the researcher recorded any instances of students' replying to other students' responses or of students' posing their own questions in response to the original teacher question.

Analysis

The researcher analyzed the data by calculating the total number of teacher questions recorded, the number that were focal and global, and various factors relating to student responses (length, depth, frequency, etc.) (See Table 1). Since the length and depth and number of student responses to each of the types of teacher questions was of particular importance in this study, the researcher performed a Chi Square test on the results of length and depth and number of responses to global and focal questions to determine statistical significance (See Table 2).

Results and Discussion

The researcher recorded a total of 215 teacher questions related to literature. Table 1 contains a summary of the results. A Chi Square test was performed on length and depth and number data for student responses to determine if the higher scores for global question responses were significantly higher. For all three factors, the calculated Chi Square value exceeded the critical value, indicating that there is a significant relationship between question type (global or focal) and each of the three factors analyzed. (See Table 2).

Table 1: Compilation of Data

	Focal Questions	**Global Questions**
Total Teacher Questions Recorded	166	49
Percent of Total Teacher Questions Recorded	77.2	22.8
Average Depth Score/Response	2.353	2.471
Number of Responses Rated "Longer" (> 1 Sentence)	13	13
Percent of Responses Rated "Longer"	6.4	14.9
Number of Student-to-Student Comments	7	3
Number of Student-to-Student Comments/Teacher Question	0.042	0.061
Number of Student-Generated Questions	7	11
Number of Student-Generated Questions/Teacher Question	0.042	0.224
Total Responses (including comments and questions)	218	101
Number of Responses/Teacher Question	1.313	2.061
Number of Teacher Questions with No Student Response	4	2
Percent of No Responses	2.4	4.1

Table 2: Chi Square Statistical Analysis

Length of Student Responses	X^2 (1, N=291) = 4.964, $p < .05$
Depth of Student Responses	X^2 (2, N=291) = 18.291, $p < .05$
Number of Student Responses Per Teacher Question	X^2 (6, N=215) = 42.290 $p < .05$

Thus, global questions in this study elicited significantly longer, more insightful, and more numerous student responses than focal questions did. In fact, responses to global teacher questions scored better on every criterion measured with the exception of "no responses" (a higher percentage of global than focal questions received no response at all from students).

Focal questions certainly do have a place in the English classroom. The researcher informally observed that focal factual recall questions could be useful to initiate or rejuvenate class discussion. In addition, the researcher observed many higher-order focal questions that were as effective as the best global questions in eliciting critical thinking from students.

The researcher feels that the main practical application of this study is a simple suggestion for teachers are trying to push class discussions to be longer and more insightful that they might want to try posing more global questions.

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Teacher Response to "Wrong" Answers in the English Classroom

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Introduction

High school English classrooms abound in talk—both teacher and student. Frequently, classroom talk results in asking and answering questions. While teachers hope that students' answers are correct, the reality is often otherwise. With this in mind, it is important to discover what kind of feedback teachers should give to student answers they perceive as wrong.

Review of Literature

Often the structure of classroom communication in the context of on-task learning follows the sequence of teacher question, student response, and teacher evaluation (Nystrand & Gamoran, 1991). When the teacher interprets the student response as wrong in some way, it is important that "errors should not go uncorrected" (Rosenshine, 1983). Effective teachers attend to a student's wrong response in order to "motivate students and to let them know how they are doing" (Good & Brophy, 2000). Effective teacher-feedback endeavors to provide students with information about the "accuracy and quality of their answers," (Gall, 1984) "to provide a blueprint for potential improvement," and to facilitate student self-evaluation (Beach & Marshall, 1990).

Not only should teachers respond to wrong answers, but also they must respond appropriately. Too often, teachers "fail to give feedback, especially to low achievers" (Brophy & Good, 1974). To a student whose response is incorrect because of a careless mistake, Rosenshine (1983) recommends that the teacher "simply correct the student and move on." However, in response to answers which are incorrect because of a lack of knowledge, Rosenshine (1983) advises that the teacher use the strategies of giving hints, simplifying the original question, or re-explain the material. A fourth common strategy is to provide "a different but similar problem and guid[e] the student to the correct answer" (Borich, 1992).

While many effective strategies for responding to "wrong" student answers are common, researchers often address problematic response strategies. Above all, research shows that ridicule, humiliation, and punishment for incorrect or ineffective responses creates an environment which prevents confident, successful, and healthy learning (Check, 1985; Borich, 1992; Probst, 1988; Henson, 1988). Other common problematic responses include "giving" the correct answer, which is often a temptation to save time and frustration, and praising "poor responses" (Borich, 1992; Nafpaktitis, Mayer, & Butterworth, 1985).

Methodology

This study attempted to discover how different high school English teachers respond to student answers which they perceive as wrong, hence the quotation marks around "wrong." Because it is irrelevant whether or not the researcher deems a student response as "wrong," this study focuses on answers which *teachers* identify as wrong in some way. This study examines various ways in which teachers react and respond to these student answers, as well as the effect which those responses have on the student, class, and lesson.

Subjects

The subjects were four high school English teachers and their students at East Forsyth High School in Kernersville, North Carolina. Each teacher instructed one grade level, ranging from ninth to twelfth grade, and varying in ability level. Approximate class size is twenty to twenty-five students.

Measures/Procedures

Ten class periods taught by each teacher were observed, totaling forty classes. Observation notes were taken, identifying and describing the verbal and physical communications of teacher and students which involved a perceived wrong answer. Notes were taken regarding the teacher's original question, the student or students' response, the teacher's response, and continued communication that occurred between the teacher and student, teacher and class, or teacher and another student. The effects of the teacher's response on student and class about "wrong" responses were also noted.

Analysis

Based on the above observations, classroom exchanges surrounding perceived wrong answers were compared and contrasted to discern significant similarities and differences, as well as strengths and weaknesses, largely based on the perceived communication and effect of the responses. The perceived effect of each teacher's responses was evaluated according to the likelihood that students are willing to risk answering questions when they are unsure of the answer. This was measured against the average number of "wrong" answers offered by students per class. Finally, teachers were identified as those who encourage or discourage risk-taking; a profile of a teacher who encourages risk-taking is offered.

Results and Conclusions

It is important to consider that although a general pattern emerges from this study, only four teachers were observed which necessitates further research.

Exchanges between teacher and students fall into broad categories. Teachers' original questions are categorized according to whether they are objective or subjective. The majority of teacher questions were objective. "Wrong" student answers fall into four main categories: 1) incorrect answers (factually wrong or too simple for what is expected), 2) promising but off-the-mark answers (insightful, engaged, but in need of direction), 3) answers differing from the teacher's own opinion, and 4) those lacking an answer (e.g., "I don't know," or no response at all). Teachers' responses to "wrong" student answers were first grouped according to 1) whether they reject or accept the answer by identifying whether or not they believe it is wrong or right or 2) suspend judgment by waiting, encouraging discussion, or refusing to either condemn or approve. Subsequently, teachers' responses were again categorized according to whether they 1) provided or clarified the student answer or 2) returned the burden for answering the question to the student through support by re-asking or rephrasing the question, asking more basic questions, hinting at the answer, and/or giving encouragement.

Teacher A instructs honors and standard Senior English classes and promotes high participation in her classroom (Cole, 2001) and moderate risk-taking. Although she often rejects "wrong" answers to objective questions, she often accepts "wrong" answers to subjective questions. In responding to incorrect answers, she usually rejects the answer and also either gives the answer herself or clarifies the student answer to make it correct. With promising answers, she more often accepts the answer and supports the student in a continued effort to arrive at a more complete answer.

Teacher B, who teaches standard Junior English, also promotes moderate risk-taking but has about half as much student participation as Teacher A (Cole, 2001). He usually rejects "wrong" answers to objective questions; however, he is inconsistent with responses made to subjective questions, sometimes rejecting and sometimes accepting. Although Teacher B is consistent about when he rejects or accepts a "wrong" response, the nature of that rejection or acceptance is often inconsistent. Teacher B usually rejects incorrect responses, but either gives or clarifies the answer or supports the student. With promising responses, his responses are also inconsistent: he sometimes rejects and sometimes accepts, sometimes gives or clarifies the answer and sometimes supports the response. For those responses lacking an answer, of which he has many, Teacher B almost always supports and encourages. Because his class offers many more responses lacking an answer, it is possible that he encourages this kind of response because of the consistent support offered. There is not enough evidence for conclusive results when a student disagrees with Teacher B.

Teacher C instructs honors and standard Freshmen English. Students in Teacher C's class apparently do not feel comfortable taking risks in their responses; likewise, their average number of responses per class is comparably low (Cole, 2001). To "wrong" answers to objective questions, Teacher C usually accepts. She rarely asks subjective questions. In responding to incorrect answers, she usually gives or clarifies the answer herself and rarely supports the student in continuing to find the correct answer. Teacher C almost always accepts promising answers and both gives or clarifies the answer and supports the response equally. There is not enough evidence for conclusive results when a student disagrees with Teacher C.

Teacher D, who promotes very high student risk, teaches honors and seminar (AP track) Sophomores. Teacher D usually rejects "wrong" answers to both objective and subjective questions; in addition, he also suspends judgment either temporarily or permanently, which often incites renewed effort by the student and discussion from the class. In responding to incorrect answers, he almost always rejects but usually gives the students support. Similar but even more compelling is how Teacher D responds to promising answers: after his usual rejection, support almost always follows. Although there is not enough evidence to draw conclusive results concerning disagreement, when students lack answers, Teacher D, predictably, offers the student support and encouragement.

These results suggest that certain teacher-responses to "wrong" answers perpetuate low student-risk and others promote high student-risk. A teacher who perpetuates low student-risk generally accepts "wrong" answers and gives or clarifies the answer her or himself. In contrast, the bywords for promoting high student risk are "reject and support." It is immediately evident to the student whether he or she is correct, incorrect, or in disagreement with the teacher, but more importantly, that he or she is given encouragement and specific ways to improve the answer.

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Methods and Philosophies of High School Social Studies Teachers

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Introduction

High school social studies teachers and their forms of instruction can generally be divided into two groups. One group, termed ***transmission***, emphasizes mastery of knowledge. The other group, ***constructivism***, emphasizes students' own construction of meaning (Barr, Barth, & Shermis, 1977; Leming, 1989; Scheurman, 1998).

The purpose of this study was to discover what teachers of secondary social studies in one North Carolina school district perceive about their own practices in and philosophies of teaching social studies. Thirty-two teachers filled out a brief survey designed to identify characteristics of these philosophies and methods as transmission or constructivist. The information gathered from the surveys is useful for 1) tracking changes in the social studies profession, 2) developing a picture of how deeply students are being challenged to think critically, and 3) supplying a springboard for more intensive research.

Review of Literature

Barr, Barth, and Shermis (1977) provide the historical background for the rise of these opposing philosophies. Since early in the 20th century, when transmission was the rule, debate has surfaced and resurfaced about whether social studies should focus on teaching thinking skills or on a predetermined base of factual knowledge. The different approaches generally have the same end in mind, namely "good citizenship" (Leming, 1989). But because definitions of "citizenship" vary, approaches differ. Sifting through the literature on the different traditions of teaching social studies leaves one with two major traditions: ***transmission*** and ***constructivism*** (Barr, Barth, & Shermis, 1977; Engle, 1989; Leming, 1989; Simpson, 1998).

The methodology found in transmission classrooms is marked by heavy teacher lectureship, student memorization, and recitation of facts (Engle, 1989; Hacker & Carter, 1987; Sheurman, 1998). In constructivist classrooms, students are confronted with problems to be solved and teacher-class discussion is more common than lectureship (Hacker & Carter, 1987; Scheurman 1998). Research finds that transmission has remained the dominant methodology among teachers, at least through the beginning of the 1990s (Engle, 1989; Leming, 1989; Newmann, 1990; Onosko, 1990; Shaughnessy & Haladyna, 1985). A study by Hacker and Carter (1987) suggests that constructivism is more common among more experienced teachers. Leming (1989) sees a dichotomy throughout the social studies profession, with university professors on the constructivist side and teachers on the other.

The literature in general strongly favors constructivism in the classroom. One reason that is passionately voiced by Engle (1989) is that constructivism fosters the independent thinking that is necessary for the health of a democracy. Newmann (1990, 1988) criticizes in particular the type of "coverage" approaches used in classrooms, claiming this approach only "reinforces habits of mindlessness" (Newmann, 1988, p. 346). Also, poor student attitudes toward social studies have compelled many scholars to endorse constructivist approaches to teaching (Schug, Todd, & Beery, 1984; Shaughnessy & Haladyna, 1985; Stevenson, 1990). Many argue that making the content more relevant and intellectually challenging will increase student engagement in the subject (Downey, 1983; Girod & Harmon, 1987; Onosko, 1990; Stevenson, 1990).

Methodology

In this study I have attempted to take advantage of a relatively small teacher population by balancing quantity and quality. The sample participating in the study included 32 social studies teachers from seven of the eight Winston-Salem/Forsyth County public high schools. The survey used was a ten-item instrument with three sections: demographic (gender, years of experience, and subjects taught); quantitative (use of alternative sources, criticism of sources, emphasis on factual knowledge or critical thinking, and lecture time vs. discussion time); and qualitative (definition of citizenship, effects of end-of-course [EOC] tests on teaching, and basic philosophy of teaching social studies). The surveys were delivered to the schools and teachers were given ten days to complete the surveys. Once completed and returned, the quantitative responses were tallied and percentages were found for the entire sample and for two of the demographic subgroups, experience and subjects taught. The qualitative responses were grouped into similar responses, tabulated, then classified and interpreted.

Results and Discussion

Out of 70 surveys distributed, 32 (46%) were completed and returned (only 28 on items 8-10). Table 1 presents the overall results for the quantitative items. On these items the teachers as a whole demonstrated constructivist leanings, with 31 (97%) using alternative sources at least once a month, 21 (66%) using them at least once a week; 29 (90%) reporting they encourage criticism of sources sometimes or often; and 30 (93%) viewing critical thinking as important as or more important than factual knowledge. On the more transmission side, teachers reported a greater percentage of class time spent in lecture (41.70%) than in student discussion (31.20%). In the subgroups, some interesting trends emerged. In the experience subgroup, the more experienced teachers reported less frequent use of sources other than the textbook, but more reported encouraging their students to be critical of sources. In the subjects taught subgroup, teachers of all subjects displayed high constructivist practices.

Table 1 – Total responses for quantitative items

4. How frequently do you have students use sources besides the textbook? **(32 respondents)**		
At least once a week	21	66%
1-3 times a month	10	31%
1-3 times a year	1	3%
Never	0	0%
5. How often do you encourage students to be critical of sources, such as textbooks? **(32)**		
Often	18	56%
Sometimes	11	34%
Rarely	3	9%
Never	0	0%
6. Which do you consider to be most important in teaching students: learning essential facts or learning to think critically? **(32)**		
The two are equal	19	59%
Critical thinking	11	34%
Facts	1	3%
Depends on students	1	3%
8. In your classes, approximately what percentage of time do you spend lecturing?		
Average:	41.70%	(28 respondents)
What percentage of time is spent in teacher-student discussion?		
Average:	31.20%	(28 respondents)

The teachers' definitions of citizenship corresponded loosely with four main categories: one's responsibility to society; thinking skills; personal reflection; and a body of knowledge. The responses dealing with one's responsibility to society were most common, with 20 of 28 teachers (63%) including this as an aspect in their definition. The common thread in most responses was that social studies is meant to provide students with the necessary thinking skills and/or information to spur them to activity, in particular to act responsibly, respectfully, conscientiously, and wisely.

Regarding EOC tests, 23 of 28 (82%) said they do teach EOC test classes, and 20 of these (87%) said the tests have caused them to change their teaching methods in some way. The three main themes among the responses were effects on course content, on course organization, and on student activities. Two responses in particular stood out, with seven each (35%) noting they had less time to study more interesting material and that they needed to move at a faster pace or follow pacing guides.

On the item regarding philosophy of teaching social studies, teachers commented on their methodology and/or teaching emphasis (thinking/reflection skills and/or life skills). Twenty-two of 28 (79%) said their philosophy is to teach thinking or reflection skills and nine (33%) dealt with methodology, or how to present the material to students. Two teachers (8%) wrote of preparing students with particular skills to guide them through life. The philosophies generally involve how to provide students with the skills and information needed to make them better citizens.

Before discussing the results, it is important to note that the numbers were not processed to find significance, and therefore all data must be viewed with caution. The results indicate there is considerable homogeneity in the practices and philosophies of high school social studies teachers in the county's school district. The strong emphasis on alternative source use, source criticism, and critical thinking show a constructivist leaning that is offset only by the higher lecture time reported. That 79% of teachers cited teaching thinking and reflection skills as their philosophy supports this constructivist leaning. Of particular interest are the differences between younger and older teachers regarding source use and source criticism. Both this topic and the effects of EOC tests on the constructivist practices of teachers are subjects worthy of more detailed research, both qualitative and quantitative.

It is important to remember that previous literature claims that transmission has remained the dominant form of social studies instruction (Engle, 1989; Leming, 1989; Newmann, 1990; Onosko, 1990; Shaughnessy & Haladyna, 1985; Shaver, Davis, & Helburn, 1979). Do the results of this survey, then, hint that the profession is evolving, as Zevin suggests (1990)? Or does the discrepancy reflect inconsistencies in the survey? This survey is meant only as a brief overview and an attempt to balance the quantitative and the qualitative. Therefore more studies are certainly needed.

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Effects of Calculator Use on Student Work

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Introduction

Technology use in the mathematics classroom is a current topic of concern among educators. While calculators have been available for use for decades, the graphing calculator has brought about change in the teaching and learning of mathematics. Students can plunge deeper into the mathematics with technology tools, such as graphing calculators, to explore functions and their graphs that are difficult to draw by hand. These calculators perform statistical operations and other calculations that save time and number crunching. As the National Council of Teachers of Mathematics (NCTM) states in the Technology Principle, "Teachers should use technology to enhance their students' learning opportunities by selecting or creating mathematical tasks that take advantage of what technology can do efficiently and well – graphing, visualizing, and computing" (2000, p.25).

The proper and most effective use of calculators in the math classroom is an issue that causes controversy. This technology should serve as a tool for instruction and enhancement of the learning of students. Some feel, instead, that the high use of calculators produces a "crutch" factor, where students are using them for basic skills that do not require technology. There should be a balance between technology and paper-and-pencil traditional techniques used in the classroom.

Review of Literature

The introduction of technology into schools and especially mathematics classrooms causes much discussion and debate. Many researchers have found that using technology in the classroom benefits the students, allowing them to delve deeper into topics and gain a greater understanding of concepts. Heid's claim is that the role of technology as a reorganizer, meaning that it "changes the fundamental nature and arrangement of the curriculum" (1997, p.7), has impacted the mathematics reform movement. The new thinking on the order of instruction is teaching concepts first and skills after. This is a reversal from the traditional approach where the focus is more on students practicing skills and less on the development of concepts.

Allowing technology such as graphing calculators in the classroom changes the requirements for students. In a traditional environment without technology, emphasis is placed, for example, on the computations of a student, the ability to graph, and skills to solve equations. However in a setting with graphing calculators, the computations, graphing, and arithmetic problems can be performed on the calculator. It follows that with technology in place, questioning must change to better engage students and to improve the quality of education. Heid (1997) states that calculator use provides a more student-centered classroom atmosphere and places more responsibility on the student for his learning through a more active participation in the learning experience.

Harvey, Waits, and Demana (1995) believe that for calculators to have an effect in the algebra classroom, "every students should have instantaneous, constant access" (p.82). In the same article, they also state that students should know paper-and pencil techniques. This is important, they say, for self-confidence in their math ability and also to know when it is appropriate to use technology. There is, then, an ongoing controversy over when to use calculators, how to use them, and how often. In Milou's (1999) study, he found that the graphing calculator has been widely accepted among high school teachers of Algebra II, but that middle school teachers and Algebra I teachers debate the appropriateness of the graphing calculator. He also concludes that revisions of the following are required: what mathematics should be taught, the value of different teaching methods, and assessment strategies.

Opponents to calculator use fear that they will become a crutch and that students' computational skills will deteriorate. Also, students may treat the technology as a security blanket and trust the technology more than their mathematical intuitions (Heid, 1997). Planning is an important factor in proper use and involves raising the expectations and types of questions teachers pose. Some teachers are not comfortable with the calculator and therefore do not use it for instruction. Success of using calculators in the classroom involves human resources along with the technology resources (Hope, 1997).

Use of graphing calculators in classrooms can also affect changes in structure of lessons, and the role of both teacher and student. The traditional classroom routine includes review of previous homework, then lecture on new material, followed by a new homework assignment. Group work is more likely in classrooms with technology and thus the teacher lectures less causing students become more active participants. The climate of the classroom is changed with graphing calculators: teachers use the lecture method less, and students can consult with the calculator and the teacher.

As the literature shows, calculator use continues to be a controversial topic among educators. There is a necessity for restructuring the classroom environment to adapt for new approaches to content with the graphing calculator and also to allow for the balance of conceptual understanding and basic computational skills. Students can become too dependent on the calculator and forget, or never learn, basic arithmetic skills. The purpose of this study is to examine the effect of calculators on students' understanding of basic mathematical concepts through investigating their work on problems, both with and without the graphing calculator.

Methodology

The sample for this study was collected from an Algebra I class in one high school in North Carolina. Ten subjects were randomly chosen from an Algebra I class roster. Gender was not examined as a variable in this study, but the sample consisted of 3 females and 7 males. Of this sample, there were seven freshman, two sophomores, and one junior.

The selected participants were interviewed in a one-on-one fashion, for approximately twenty minutes, over a 6-day period. Interviews were conducted in the back of the math classroom. The interview, also audio recorded for later analysis, contained two sets of mathematical problems and the interviewer alternated the order of the two. Each participant was asked to verbally describe his/her steps as he/she worked all problems. Also, general questions were asked about calculator use in their classroom for background information. On the calculator problems, students were permitted to use a TI-83 Plus calculator and students were given 10 minutes to solve each set of 10 problems.

The data collected from student interviews was examined, both for correctness and evidence of understanding. Students' written work was analyzed along with the taped verbal explanations to check for student understanding of how to work the problems.

Results and Conclusions

Each student's interview data was evaluated for completeness and for students' general understanding of the mathematics involved. The researcher graded responses to problems and identified each in the following categories: correct, partial, skip, and wrong. Below, in Figure 1, the overall paper-pencil responses are compared to the overall calculator responses for all 10 subjects and all question items. Generally, students answered more questions correctly when using the calculator, but received partial credit on more questions when using pencil-paper techniques. Possibly due to confidence levels, students were more likely to skip a problem without the calculator. Also, the higher number of wrong answers in the calculator portion may be due to the fact that fewer problems were skipped. Students may have had more confidence to try a problem using the calculator, but the resulting response could have been wrong.

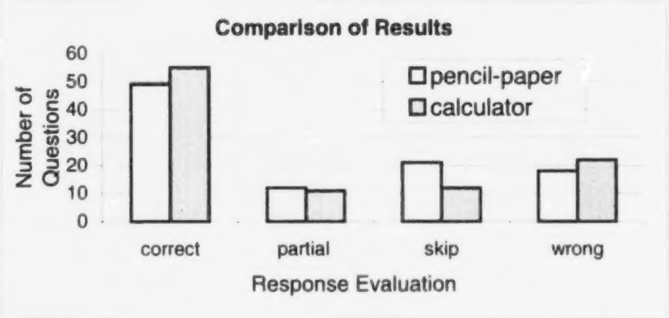

Figure 1

The difference between pencil-paper and calculator responses that received credit was examined by student using a paired-samples t test ($\alpha = 0.05$) and results indicate that there is not a significant difference between the means of students' correct responses on the paper-pencil portion and the calculator portion ($t(9) = 1.160$, $p > .05$). The mean value for correct responses on the pencil-paper problems is lower than the average number of correct responses on the calculator portion, but as the statistics indicates the difference is not significant.

Based on interviews and the analysis of student work, there were general trends noted in students' approach to specific question items. Item 5 involved solving a proportion with decimals. Only one student received full credit on the pencil-paper set of problems and with the calculator, six students gave correct answers. Although, the t test indicated no significant difference, results on this question greatly improved with the aid of a calculator. For items 2 and 3, solving an equation and simplifying an expression, the calculator portion showed fewer correct responses than the pencil-paper portion of the interview.

The TI – 83 Plus calculator was available to all students during the calculator portion of the interview and all students did use the calculator, but students varied greatly in their confidence and ability level. Some students chose to use the calculator to check their answers that they obtained with paper-pencil techniques. Other students relied mostly on the calculators and attempted to solve the equation and simplify the expression using variables on the calculator.

Due to limitations of this study, this sampling may not have been representative of all Algebra I students. Students should have known all of the material on the sets, but the unfamiliar syntax may have been a problem for some students. Researchers might wish to look further into the specific types of questions that students generally use their calculators for. From discussions with students after the problem sets, most students claim to use the graphing calculators mostly for graphing lines. However, this was not indicative of the results from the calculator portion of the interview.

From the results of this small study, it appears that calculators do not significantly affect students' responses on mathematical problems. Students who knew how to solve questions generally could do so with and without the calculator. Based solely on this study and its conclusions, it seems as though teachers should continue to let students use calculators in class and not fear the loss of essential mathematical skills. Calculators have flooded schools and although the debate may continue on their use, students are handling the technological advances well and are able to use them efficiently for help with decimals and checking multiplication and division. Calculators do have an important place in the classroom, but studies should continue on how to best implement and make use of the tool in mathematics classrooms today.

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What Motivates Student Leaders

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Introduction

The National Council for the Social Studies developed Ten Thematic Strands as guidelines for Social Studies courses. This study, focuses on the Tenth Strand, which states, "Social Studies programs should include experiences that provide for the study of the ideals, principles, and practices of citizenship in a democratic republic" (NCSS, Thematic Strands, Strand X, first paragraph, 2001). In other words, Social Studies courses ought to produce active citizens (Wade, 1994; Wade & Saxe, 1996).

There are many characteristics of an active citizen, but for this study, the focus is on the characteristic of leadership. But how do we develop community leaders in the Social Studies classroom? Research on what motivates high school students is hard to find so this topic is ripe for study. Thus, the purpose of this research is to look at the motivations of high school student leaders to determine whether their Social Studies courses motivated them to be leaders.

Review of Literature

In order to sustain a democratic society, we have to educate citizens about their rights and responsibilities, such as taking on leadership roles; otherwise, democracy is at risk (Clark, 1990; Eyler & Giles, 1999; Fitch, 1987; Wade & Saxe, 1996). Social Studies provides an excellent forum to promote social responsibility and civic participation. In addition to simply knowing their rights and responsibilities, students ought to participate in their communities by volunteering or assuming leadership responsibilities. Student participation can occur by assuming leadership positions at their high schools because a school is a type of community. The question then is what motivates these students to be leaders. Unfortunately, it is difficult to find research on what motivates high school student to assume leadership roles and be active citizens because the available research examines only college students (Fitch, 1987; Serow, 1991).

Clearly, Social Studies must emphasize leadership because students who perform service to the community strengthen their "sense of commitment to the good of the larger community of which they are a part" (Clark, 1990, p. 206). Fortunately, leadership is an engaging experience for students and can develop social responsibility; these meaningful experiences can be ideal ways for students to learn (Billig, 2000). Thus, in the Social Studies classroom, we must develop leaders with a social conscience in order to guarantee the strength of our communities and society in the future. This responsibility is considerable, but Social Studies can fulfill this responsibility in many ways.

One way to fulfill this goal is through service learning, which is a project that fulfills a community need, allows students to reflect on the work they do, and is incorporated into the Social Studies curriculum (Billig, 2000; Wade & Saxe, 1996). Volunteer service is also another way to encourage community participation, but it is different from service learning because it is not part of the curriculum and does not require reflection. Although the specifics of service learning, community service, and student leadership vary, this research examines them generally by grouping them under the heading of providing service to the community.

We need to determine students' motivations to be leaders because the benefits of these experiences are enormous. For example, volunteering and leadership activities may be a predictor of future civic participation (Kirby, 1989) and they increase students' sense of social responsibility (Conrad & Hedin, 1991). Finally, Billig (2000) points out that service learning develops students who are more likely to critically examine politics and societal morality, determine ways to effect change, and increase their understanding of society's institutions. Clearly, the benefits are significant enough that we must learn what motivates students in order to develop more effective Social Studies courses.

Methodology

This study is qualitative and used a convenience sample from one high school in the Winston-Salem/Forsyth County School System. The central question for this study is what motivates high school students to be leaders and whether or not their high school Social Studies courses influenced them in their decision. This question breaks down into two parts. The first part focuses on the general motivations that prompt students to take on the additional activities that leadership positions require. According to Fitch (1987), motivations can generally be broken down into three types: (1) Altruistic—the goal is to increase others' welfare; (2)

Egoistic—the goal is to increase the volunteer's welfare; and (3) Social Obligation—the volunteer feels he or she has to repay a debt to society. The second part of the question, however, is where the true goal of this research study will be answered. This portion of the research questions delves into the effectiveness of Social Studies courses in encouraging students to be leaders and active participants in their school community. This is potentially significant for all Social Studies teachers because if the classes do not motivate students, then encouraging leadership must be incorporated into the coursework.

Six seniors who are active leaders at the high school were selected based on guidance counselors' recommendations. These students were interviewed individually. Tapes of the interviews were analyzed for any trends about the participants' motivations with special attention to information referring to Social Studies classes. The tapes were destroyed at the end of the study.

Results

The data collected from the participants illustrated several trends. First, seventeen of the twenty-four influences students indicated were for personal gratification and of these factors, all six participants said their parents encouraged them to be leaders. Another trend was that five of the six students said individual teachers influenced them to be active in the community and four of the six said friends were influential. Additionally, all six students participated in leadership activities throughout high school and four of the six were involved before high school as well. Finally, four of the six students indicated their Social Studies classes informed them about leadership.

The first trend to emerge from the data is that the students are overwhelmingly motivated by factors classified in the Egoistic category. Seventeen of twenty-four responses fit into this category. For example, Participant B indicated five egoistic motivations in his statement that he was motivated by:

> The will to excel over my peers. Uh, make myself look as good as I can in front of authority figures and try to move up ahead of others. Maybe get a little boost whereas in like going to college and to make relationships with adults that will help me along.

Another trend was that all six participants indicated their families were highly influential and stated a desire to please family members. Participant C indicated:

> . . . like Asians are really, like, I don't know. We emphasize a lot on school you know and leadership and stuff like that so I've always kind of done stuff to please, like, you know, my parents and even a lot of people, like my uncles.

Furthermore, four of the six participants also indicated their friends were influential and five of six participants said individual teachers influenced them to be leaders. Four of these five further indicated that these teachers encouraged them to participate in clubs and activities, but not necessarily as part of a class. The encouragement usually occurred at other times, such as after school. Participant E indicated that one teacher told him that, "If you have an idea, go for it, even though you're like young. It doesn't matter."

Seven responses fit into the Altruistic category. Four of the seven responses in this category came from four of the six participants who indicated their Social Studies courses taught them about civic responsibility and community participation. No participants indicated any responses fitting into the Social Obligation category. Another significant trend in this study is that all six participants indicated they were involved in leadership activities throughout high school and four of the participants in middle school as well.

Finally, this research found that four of the six students identified Social Studies courses as teaching them about leadership and how to be involved in the community. Participant A indicated that his Social Studies courses provided information "about leaders of countries, leaders of groups around the city, mayors, governors and gives us some of their characteristics and how they, whether they're good or not." Thus, for these students, individual role models influenced them, but when prompted they also indicated their Social Studies courses informed them about leadership, which is important because this is one of the goals of Social Studies.

Discussion/Implications

The results are significant because four of the six students, when prompted, stated Social Studies courses informed them about leadership. Meeting this goal is essential because the ideas of leadership and community responsibility are ones we must convey to our youth in order to preserve and strengthen our democracy.

While it is very positive and significant that students think Social Studies classes teach civic responsibility and community participation, the majority of reasons for being a leader are very Egoistic. These findings are consistent with Phillips's (1982) argument that volunteering should be thought of as part of the social exchange theory, which says that the benefits of an action, in this case volunteering, must be at least equal to if not more than the costs of the action. Furthermore, these results support previous findings by Clark (1990) and Wade and Saxe (1996) that society is very focused on the success of the individual and no longer as concerned about the good of the community. Additionally, these results supported Fitch's (1987) findings that families and friends were significant influences on students. Also, individual teachers may be more influential than actual classes because like family and friends, they are specific role models so students may more readily recognize people as motivational factors than classes.

In order for Social Studies classes to be more influential for students, teachers ought to incorporate students' personal experiences into the classroom in order to draw parallels between personal experiences and the world around them. Teachers should also point out activities that teach the students about leadership as part of community responsibility and civic participation.

One benefit of including students' experiences is that students will make the connection that leading in their school community is an important form of community participation. This inclusion could be part of the everyday classroom experience and would be similar to how service learning incorporates the community experience in the classroom. Since the benefits from leadership activities are high and beneficial for the individual and the community, it is important that the students learn about leadership as a form of civic participation in their Social Studies classes. Thus, it is significant that this study found that when prompted, students feel their Social Studies classes informed them about leadership.

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Archetypal Criticism in the Classroom and Student Response to Literature

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Introduction

Observing in the field, I became interested in one teacher's commitment to looking at literature through the lens of archetypal criticism. In my research I attempted to figure out what kind of an effect this commitment has on how his students understand and talk about what they read. I compared the in-class comments of this teacher's students with those of three other teachers uncommitted to any particular critical mode.

Review of Literature

In his essay, "On Teaching Literature," Northrop Frye defines an archetype as "a repeatable unit of imaginative experience that turns up constantly and unpredictably." The appearance of archetypal images, motifs, and patterns throughout the history of literature means that an archetypal approach to literature can help a student make connections between the different works he or she is reading. One might also theorize that because archetypes are universal, an understanding of them will help a reader connect personally with what he or she reads. The following four studies all suggest that archetypal criticism can play a vital role in the language arts classroom; each points to a different way in which the study of archetypes can help students make the all-important connection between literature and their own lives.

Patricia Spencer (1990) incorporated the study of archetypes into an African literature unit and found evidence in her students' journals that they were connecting with what they read on a much deeper level than they might have otherwise. After reading a section of Clayton Bess' *Story for a Black Night* where the narrator encounters a leopards on the edge of the bush, one student wrote in her journal: "I grew up with 'leopards' in the street. Shortly after dusk a few shots were fired to warn, to signal, 'no safe passage.' My parents sent me out of Lebanon last year to live with my grandmother in Iowa. Until then, I thought all neighborhoods were war zones." The quotation marks this student put around the word "leopards" indicate not only that she understands the way in which they function in this story to symbolize the emergence of evil, but also that she can make the connection between this emergence and a similar one in the text of her own life. Spencer sums us the process nicely: "Through an awareness of literary archetypes, students cross cultures, time, and continents, making connections between their world and the world of others." According to William Brozo and Ronald Schmelzer (1991) archetypal awareness can promote connection with a target audience. These authors suggest that literature featuring male archetypes can be used to get boys excited about reading and reinforce positive conceptions of masculinity. The thinking behind this idea is similar to that of Spencer except the focus is on intra-gender connection instead of that which is cross-cultural.

Other articles focus on how archetypal approaches can direct and improve student writing. Edith Crow (1986) describes an assignment in which she asks students to write about an initiation or rite of passage experience in their own lives so that they might gain a more personal knowledge of this archetype. She suggests that this kind of writing helps students identify archetypal patterns in literature and can lead them to define their own values. Jeffrey Davis (1990) substituted a puppet show expressing an archetype for the traditional essay and found that "students who students who…previously [wrote] flat uninspired essays often [produced] lively intelligent plays." Davis attributes this change for the better partly to the more creative medium, but it is also clear that he thinks the study of archetypes facilitated his students work. He writes about how using an archetypal approach "the students see for themselves that although other people may appear strange and unpredictable, all of us share certain perceptions of the world, which subsequently show up in our stories. This realization makes the stories more pertinent to the students' lives."

There are potential dangers associated with the archetypal approach to literature. Holsberry (1980) lays out a curriculum framework based on archetypes but he stresses the importance of discussing the unique aspects of individual works as well as the recurrent patterns that occur in it..He points out that if all that is being looked at is archetypes, distinct fictions that share archetypal patterns or themes might blend together and lose their individuality. Oedipa Maas and Nick Carraway might become just a few more examples of that classic American archetype. Milner & Milner (1999) bring up another potential pitfall associated with bringing archetypal criticism, or any other form of literary criticism for that matter, into the classroom. They make the point that "when knowledge exterior to literature.... becomes central to its interpretation, ordinary inexperienced readers feel excluded and distrustful of their own responses." This statement indicates that a rash approach to incorporating archetypes into the language arts curriculum could possibly hamper a student's connection with literature instead of aiding it; clearly the issue is complex.

With these potential pitfalls as well as the above success stories in mind, I began my own study into the effect of archetypal criticism on student response to literature.

Methodology

I compared the in-class comments of students in an English class where the teacher uses the archetypal approach with those of student's whose English teacher does not, using the following criteria. How often do students speak about literature? How in-depth are their comments? How often do students initiate discourse? How often do they use the language of literary criticism? How often do they relate literature to their own lives?

I conducted my study at a large public high school in Kernersville, North Carolina. I observed a total of thirty class sessions, fifteen in the classroom of the teacher who uses the archetypal approach (who will henceforth be referred to as Teacher A) and fifteen in the classrooms of the three other teachers who do not (who will be referred to as Teachers B, C, and D). I split my time in the classrooms of these three teachers evenly, observing five periods in each. In each of these class sessions I tallied the above frequencies.

Results

In the classroom where the archetypal approach is used I counted more students comments about literature, more in-depth comments, more student initiated discourse, more instances of students using the language of literary criticism and more instances of students relating what they were reading to their own lives. The total number of times each of these events occurred during fifteen periods in the classroom of Teacher A (who uses the archetypal approach) and fifteen periods in the classroom of Teachers B,C, and D (who do not use the archetypal approach) are recorded in Table 1.

Table 1. Total Frequencies

	Student Comments	In Depth Comments	Students Initiated Discourse	Students Use the Language of Literary Criticism	Students Relate Literature To Themselves
Teacher A	82	26	17	10	4
Teachers B, C, and D.	76	7	3	1	3

To determine whether or not the above discrepancies were significant, I conducted five Chi Square tests, one for each category. The results of this statistical analysis are displayed in Table 2.

Table 2. Chi Square Test Results

Student Comments	$X^2(1, N=158) = .228, p<.05$
In Depth Comments	$X^2(1, N=33) = 1.4848, p<.05$
Student Initiated Discourse	$X^2(1, N=20) = 9.8, p>.05$
Students Use the Language of Literary Criticism	$X^2(1, N=11) = 7.36, p>.05$
Students Relate the Literature to Themselves	$X^2(1, N=7) = .142836, p<.05$

These results indicate that the archetypal approach seems to have had a significant impact only on the frequency of student initiated discourse and the frequency of students using the language of literary criticism. This latter finding makes the most intuitive sense: students in Teacher A's class are using the terms that they have been systematically taught. In all ten instances of students using the language of literary criticism which I observed in Teacher A's classroom, the word or words used was somehow related to archetypal theory. My findings indicate that, because they are using it in class discussions, students in Teacher A's classes are, to some extent, internalizing the theory he is teaching them.

The statistically significant difference between frequency of student initiated comments in Teacher A's classes and Teacher B, C, and D's classes is a slightly more surprising finding. Although there are certainly other variables to consider, one could theorize that because they have been taught a mode of literary criticism, students in Teacher A's classes are more comfortable initiating discourse. In some instances, a student in Teacher A's class would spontaneously make a comment or ask a question when they made a connection between archetypal theory and what they were reading.

Though by no means conclusive, my study indicates that the archetypal approach to teaching literature can be effective at the high school level: if taught archetypal theory, students will at least sometimes use it in their efforts to interpret literature.

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Teacher Use of the Target Language in the Secondary Spanish Classroom

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Introduction

In the field of foreign language education, quality of learning has come to be synonymous with proficiency. The development of proficiency ensures that students of the language will be able to use the language in oral and written form at a sophisticated level upon completion of an articulated program. The challenge for foreign language teachers is how the foreign language should be taught in order to accomplish this.

Foreign language teachers have a choice regarding the language they use in the classroom. Even though research indicates that optimum language proficiency is best achieved by near constant use of the target language in the classroom, teachers still have and utilize their prerogative as to how and when the first language or the foreign language is used. It is commonly held that students achieve a higher level of proficiency in the target language if they are provided with a rich target language environment in which almost all instruction and classroom duties are carried out in the target language (Chaudron, 1988).

Review of Literature

In 1995, the American Council on the Teaching of Foreign Languages (ACTFL) released *Standards for Foreign Language Learning: Preparing for the 21st Century* (ACTFL, 1996). This document provides the framework for the standards reform movement that is changing the way professional educators approach foreign language instruction. The national standards established the five C's of foreign language education that recognize five interconnected goals of Communication, Cultures, Connections, Comparisons, and Communities. The introduction to the standards document states that the standards are not meant as a substitute for curriculum, but rather, they should be used as a guide to shape instruction and curriculum (ACTFL, 1996).

Furthering the parameters set by the national standards, ACTFL released a complementary document in 1998 entitled, *ACTFL Performance Guidelines for K-12 Learners* (ACTFL, 1998). While the national standards provide the "what" or the content that should be taught in American foreign language classrooms, the *Performance Guidelines for K-12 Learners* are quality standards intended to show how well students can be expected to achieve the 'what' from the content standards (ACTFL, 1998). The national standards and the *Performance Guidelines* provide goals and frameworks but do not prescribe how foreign language instruction should be carried out in the classroom. The *Performance Guidelines* state that language acquisition is deeply affected by the level and quality of language and culture content provided by the teacher (ACTFL, 1998).

Teacher use of the target language in the foreign language classroom directly corresponds to the stated goals of the national standards. Curtain and Pesola (1994) support this practice stressing that the amount of time a student is exposed to another language has great influence upon that student becoming proficient in the language.

Despite the fact that use of the target language in the classroom is an essential component of both the national standards and the ACTFL *Performance Guidelines for the K-12 Learner,* there remains a conflict between accepted theory and practice. Curtain and Pesola (1994) state that in the past, elementary school foreign language teachers have found standards in general to be vague in reference to real life classroom practice and therefore find a problem articulating the goals of these standards in their daily teaching practices.

To better understand the importance of the teacher's use of the target language in the classroom, it is important to understand first the amount of time spent in a foreign language classroom by the average secondary school student. According to a survey entitled, *Foreign Language Instruction in the United States* (Branaman& Rhodes, 1998), "1997 secondary schools offered a variety of levels of foreign language instruction, and the majority of these classes tended to be taught in a non-intensive manner. The most common length of class-time for almost all of the languages was five hours of instruction per week" (p.3). Students in a secondary foreign language program are not unlike their elementary counterparts in that the more authentic contact students have with the target language, the higher the level of proficiency they will be able to achieve (Campbell, Gray, Rhodes, & Snow, 1985).

There are many factors that contribute to the teacher's choice of language in the classroom including familiarity with the current standards, confidence and/or competence with the target language, and the use of the target language in the teacher's planning (Graham, 1997). Higgs (1984) comments on the subjective nature of the classroom and that even with the advent of standards in the field of foreign languages, the classroom environment may well be more influenced by a teacher's feeling of confidence than by externally imposed considerations of methodology. The purpose of this study is to investigate how high school Spanish teachers use the target language in order to help their students develop proficiency in the Spanish language.

Methodology

Ten high school Spanish teachers in a North Carolina school system participated in this study. These teachers agreed to be interviewed individually by the researcher and to allow the researcher to conduct classroom observations as a follow-up to observe specific use of the target language in their Spanish instruction. All information was gathered confidentially and no individual names will be revealed in the analysis.

There are two parts to this study. The first consists of the individual interviews to determine information about teacher use of Spanish as it relates to Spanish language instruction. The interviews were audio recorded for later reference. The second part of the research is the observation of at least one of each of the teacher's classes in order to see specific use of Spanish as it relates to teaching strategies used in the classroom.

Results and Conclusions

Individual interpretation of the national standards by teachers varies greatly. A very basic challenge facing foreign language teachers is how much time should be allocated to using the target language in the foreign language classroom. According to the answers given in the interviews, teachers in lower level Spanish classes generally use the target language less than fifty percent of the time and teachers of Level Three and higher use the target language more than sixty percent of instructional time. It should be noted that the two teachers using Spanish more than fifty percent of the time in Level One Spanish classes have taught for five years or more.

The percentage of Spanish used for instruction rose according to the level being taught. Nine of the ten teachers interviewed taught a Spanish class at Level Two or higher. All nine of these teachers stated that they use Spanish more than fifty percent of the time in these classes with three of the teachers quoting a level of seventy-five percent or higher.

None of the Level One classes were required to use only Spanish in class. One Level One teacher stated that students were expected to use Spanish language that they had previously learned. All the teachers of higher-level Spanish classes indicated that they would like for their students to use more Spanish in class, but that it has been difficult to enforce.

The most common reasons for teacher use of English in the classroom were to teach grammar. Teachers stated that they felt it necessary to teach grammar clarification. They also stated that they used English for anything for which they needed absolute student clarity such as assignments and discipline issues.

The most common examples of activities done to provide authentic opportunities to communicate in Spanish for the presentation of grammatical concepts were interpersonal language usage, student dialogues in Spanish, and class skits or role-plays in Spanish. Teacher examples of authentic opportunities did not seem to be directly related to the teaching of discrete grammar points.

Regardless of instructional level, the most common reason for lack of use of the target language in class was student ability level. Several teachers indicated that they felt that student ability level was low and that this contributed heavily to low use of the target language in the classroom. Overall, student willingness to communicate in the target language, even at higher levels of instruction, played a substantial role as well according to their teachers.

Although nine of the ten teachers interviewed indicated that they were familiar with the 1998 *ACTFL Performance Guidelines for K-12 Learners*, three teachers indicated that they had only heard of the *Performance Guidelines*. Only one teacher was not familiar with the *Performance Guidelines* in any way. With an explanation of the *Performance Guidelines* provided by the researcher, all teachers indicated that they incorporated them into their teaching. When asked to name specific strategies used in their teaching which utilize the interpersonal, interpretive, and the presentational aspects of the *Performance Guidelines*, teacher responses did not differ greatly from strategies named in the presentation of the grammar concepts.

This research showed that while teachers know that heavy use of the target language in the Spanish classroom is important to develop student proficiency, they are not using the target language as the primary vehicle of instruction, especially in lower level Spanish classes. This is significant because one of the major reasons given for low use of the target language was low student ability. Given the small percentage of daily instructional time that students are in a foreign language setting, the use of the target language during class becomes even more vital toward achieving proficiency. It seems logical to suggest that if teachers used the target language as the primary vehicle of instruction closer to one hundred percent of the time, student ability level would be higher. Then, low student ability might no longer be perceived as a hindrance to the use of the target language in class.

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Team Learning: A Pilot Study

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Introduction

Teachers must put effort, creativity, and ingenuity into the science classroom and curriculum in order to ensure the material will remain fresh and interesting for the students and for themselves. In one case an organic chemistry teacher used a "Team Learning" method in order to keep the material stimulating for his students and to overcome some of the difficulties teachers face (Dinan & Frydrychowski, 1995). This experiment in new curriculum involved using teams over the course of a semester to teach the required material.

Dinan and Frydrychowski (1995) found that this method seemed to increase the effectiveness of learning and student interest in the subject. Other results showed students were arriving earlier for classes, and that students were missing fewer classes over all. While Dinan and Frydrychowski's (1995) study shows the team learning method to work well at the college level, there is no research to show if it would work well at the high school level. As a result the researcher chose to do a pilot study in this area to determine if the use of this method would have any positive effects at the high school level and if further research was warranted.

Literature Review

Science teaching methods have been traditionally rooted in behaviorism, where the "aim is to transmit knowledge experts [teachers] have acquired" (Spencer, 1999, p.567). According to Spencer (1999), these methods have been shown to be ineffective in developing the critical thinking and problem solving skills of students. Through the gathering of this knowledge has come the realization that students must be engaged as active learners (Spencer, 1999). As a result, educators have sought to implement active learning through a variety of methods with cooperative learning being one of the most widely utilized methods (Culatta, 1994).

According to Roger Johnson and David Johnson (1991a), there are five defining elements of cooperative learning: positive interdependence, face-to-face promotive interaction, individual and group accountability, interpersonal and small group skills, and group processing.

Cooperative learning is defined by these aforementioned elements but is further defined by the different types of learning groups: informal, formal and base. Informal learning groups are designed to last for a few minutes or for an entire class (Marzano et al., 2000). These groups are the least structured and are very short-term (Johnson et al., 1991a). Formal learning groups are much more structured and intended to last for the duration of an assignment, which may last for several days or up to a few weeks (Johnson et al., 1991a). Finally, base learning groups are used for long-term assignments and are designed to last the duration of a semester or even an academic year (Marzano et al., 2000).

Small-group instruction has been shown to decrease dropout rates, retain non-traditional students, and reduce gender and racial bias (Dinan et al., 1995). When performance requires multiple skills, judgments, and experiences, teams outshine the performance of individuals acting alone and students are able to become more successful (Katzenback et al., 1994). However, when cooperative learning is overused, students may have insufficient time to practice the skills and processes they need to master (Marzano et al., 2000). Furthermore, Marzano et al. (2000) suggests that when cooperative groups are not well structured the method is being misused. Therefore, for the cooperative learning method to be most effective, it is key for the educator to neither overuse nor misuse the method.

As a result of these positive effects of cooperative learning, it is important to look at how teachers can practically implement the method in their classrooms. "Team learning" is one such manner in which formal and base groups can be utilized throughout a semester as a method of cooperative learning. Dinan et al. (1995) suggest using a team learning method in the teaching of chemistry. This method was initially implemented in an introductory level organic chemistry class (Dinan et al., 1995). Dinan et al. (1995) found that team members tended to motivate attendance and preparation, provided learning assistance for each other, and handled discipline problems. Dinan et al. (1995) also found the majority of students were arriving early for class, as early as five minutes, in order to have extra time with their groups. According to this study, 82% of the students who were in the class felt they learned more effectively than when they were in a straight lecture class (Dinan et al., 1995). While Dinan and Frydrychowski's (1995) research shows the team learning method to be an effective cooperative learning method at the college level, there is no research showing whether this method would be effective at the high school level. Therefore, the purpose of this paper is to determine if this method is effective at the high school level and if further research is warranted in this area.

Methodology

In conducting this research, a high school Anatomy teacher (Teacher A) was consulted at a medium sized public high school in the Piedmont area of North Carolina. The demographic breakdown of this school from the 10th day membership in 2000-2001 reported 563 minority students and 1102 white students. Teacher A assisted in recruiting Teachers B & C who taught Environmental Science and Earth Science respectively at the same high school. Teachers were asked to select at least two classes in which they could implement the "team learning" method. Teacher A chose to work with two honors anatomy classes. Teacher B chose to work with four Environmental Science classes and Teacher C chose to work with two Earth Science classes.

In the classes chosen, objectives in the form of homework or reading were given to students the day before the methods were to be utilized in the classroom. When the students in the Team classes entered the classroom, they were given an individually taken content quiz. Then the students were given ten minutes to work in groups and take the exact same quiz as a group. During the group quiz time the teacher looked over the individual quizzes to find any inconsistencies in answers, and areas where students had difficulty understanding. The class then reviewed the quizzes together, and the teacher opened the floor for questions on the objectives, and supplied new information if necessary. A third quiz, different from the first two, was then given at the end of class as a posttest to see if any learning had taken place. The researcher also observed at least one class of each teacher.

When the control class entered the classroom they were given the same quiz the "team learning" classes received at the beginning of class. These students then received normal educational instruction from their teacher. At the end of class the teacher then gave the same quiz the "team learning" students received at the end of class as a posttest. The teachers also developed, distributed, administered and collected the quizzes. The collected quizzes were given, with a grading key, to the researcher to be graded.

Teachers A, B, and C were interviewed after they had completed their jobs in the study. Informed consent letters were given to a randomly selected group of students in all the classes that were part of the research, by the teacher. The consent forms were required for the selected students to participate in interviews.

Discussion

The first question for this research was whether the team learning method would have any effect on achievement. This was answered by finding the statistical difference between the percent improvements from quiz one to quiz two. It was found that students who were exposed to the team learning method did not have a significantly greater improvement on quiz scores. This suggests that team learning does not increase improvement on quizzes or learning. Further analysis through Factorial ANOVA showed that class type and teacher have no significant effect on their own (class type significance= 0.058, teacher significance= 0.865); however, the interaction between teacher and class type resulted in a significant effect on student achievement (teacher*class type significance= 0.0005). This suggests that while the teacher and the class type alone do not have a significant effect on improvement, the interaction of teacher and class type do have an effect on improvement.

This was suggested through an Independent t-test analysis done on each teacher's classes. There was a significant difference between the two types of classes' mean percent improvement scores for each teacher. Teacher A had a significant difference of 0.036, with the mean percent improvement score for the control classes higher. In Teacher B's case there was a significant difference of 0.050 and for Teacher C it was a difference of 0.002 between their control and experimental classes. For both of these teachers the significant differences indicated that the mean percent improvement scores for the team learning classes were greater. These results suggest that team learning does increase improvement on quizzes and may also increase learning. This may suggest positive results from using team learning at the high school level.

The students' interview notes showed students preferred the team learning method to a normal control class. Many felt they learned more, or understood the material more clearly. Some felt it was less difficult because they had more minds to work with and thus were more likely to get the right answer and understand the concepts. A select few were worried about one person doing all the work, but the majority felt all would contribute in some way. The teachers' interview notes also showed a partiality for the team learning method. However, all teachers felt that it would not be a good method if it were utilized everyday. Furthermore, all teachers felt they would indeed use the method again in their classrooms.

There are possible sources for error within this research study. Each teacher has a different control teaching method and thus should not necessarily be compared or grouped together. Also when observing teachers in the classroom, the researcher noticed that some used very visual aspects to teach their control or normal class with overheads or the white board. Finally, as all teachers utilized the method on different days, and there were three different subjects, the same material was not covered on the quizzes. This may have some effect on the results and should be considered when doing another study.

In conclusion, this pilot study shows team learning could be a very effective method in the high school classroom. The somewhat positive results found in the percentage improvement scores and the preference shown for it by students and teachers is cause to continue further study and investigation. Students enjoy it, the teacher easily implements it, the percent improvement on quizzes for some teachers is significant, and the effects of working in cooperative groups are also known to be significant. Therefore, team learning may perhaps be a very effective and positive way to increase student scores and promote a greater amount of learning.

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What Motivates Secondary Social Studies Teachers to use Primary Sources?

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Introduction

Some educators (Marlow & Page, 1998; Nash & Symcox, 1991; Percoco, 1998) state that learning is not received, rather that it is achieved. Increasingly, students are able to "uncover, discover, and reflect on content and their conceptions of such through inquiry, investigation, research, and analysis" (Marlowe & Page, 1998, p. 11). One such way that students do this in the high school social studies classroom is through the use of primary sources, historical documents and artifacts such as diaries, newspapers, art, pottery, tools, places (buildings, dwellings, etc.), music, stories, paintings, and photographs (Shiroma, 2000). Researchers (Nash & Symcox, 1991; Percoco, 1998) argue that by allowing students to construct their own understanding of people, events, and ideas by using things such as primary sources, the learning process is enhanced.

The purpose of this study was to discover what motivates high school social studies teachers to use primary sources in their classroom. By interviewing social studies teachers from various high schools in the Winston-Salem, North Carolina, area, answers to this questions began to surface. Ultimately, the findings from the study will give teachers a better understanding of how and when to use primary sources in the high school social studies classroom.

Review of Literature

When students are asked to study the broad discipline of social studies, they are really asked to delve into the lives of people who are currently living or have lived at another time in order to gain a better understanding of the past and the present (Deitch, 1997). How should students begin to delve into the lives of people? There are two possible answers to this question in a social studies classroom. Students can either use secondary sources, most likely their textbook, or they can use primary sources. It can be assumed that some social studies educators have been using primary sources since the field was introduced in the high schools. However, much credit must be given to the National Archives and Records Administration and the

National Council for the Social Studies (NCSS) for introducing "Teaching with Documents" in 1977 in the NCSS journal *Social Education*. Since this time, the use of primary sources in the social studies classroom has certainly increased. Both the National Archives and the NCSS stated that primary sources exposed students to three important historical concepts. First, students learned that all history is an interpretation of past events and must be evaluated carefully. Second, as a result of primary sources, students were able to touch the lives directly of people in the past. Third, students developed a wide range of important analytical skills as a result of using primary sources (Schamel, 1998).

Several others have also offered their opinions as to why primary sources should be used in the social studies classroom. Schamel (1998) tells us, "The most important educational benefit of the study of primary sources is the development of broad cognitive and analytical skills" (p. 9). Percoco (1998) argues that as students work with primary sources they are able to do more than just absorb information; they are able to analyze, evaluate, recognize bias and contradiction, and determine the significance of evidence presented by the source. Similarly, Obrochta and Evans (1996) state that one of the best ways to teach higher level thinking skills such as speculating, hypothesizing, reasoning, theorizing, researching, documenting, corroborating, and concluding is through the use of primary sources. Deitch (1997) believes that primary sources provide students with many perspectives on history, which a textbook, a source generated by one author or a group of historians, cannot do. Morris (2000) confines the use of primary sources in the classroom to artifacts, a primary source that students can actually see and touch. Hill (2001) believes that "history comes alive not from the reading, but from the doing" (p. 4). She argues that using oral histories is one way to make history more personal and relevant. Likewise, Siler (1996) states, "An oral history project involving local participants is an exciting method of providing students the opportunity to 'experience' history firsthand, which makes the learning of United States history a more valuable experience" (p. 2). Historic places also allow students to experience "real" history (Harper, 1997). Finally, the work of Gary Nash and the National Center for History in the Schools at the University of California Los Angeles has proven instrumental in introducing and advocating the use of primary sources in the classroom. Nash and others hope to show that "some of the most exciting and active learning is to be accomplished when students take a short holiday from their textbooks in order to delve deeply into a particularly rich moment in the historical development of a particular society" (Nash & Symcox, 1991, p. 25).

Methodology

As part of normal educational practice and by studying instructional strategies, I determined through a qualitative study some answers regarding what motivates social studies teachers to use primary sources in their classrooms. More specifically, the study focused on how teachers use primary sources, where they acquire primary sources, when they use them, and to what end or effect primary sources are used in the classroom.

This study looked at social studies teachers in three Winston-Salem, North Carolina, area high schools. Teachers at West Forsyth High School, Parkland High School, and Glenn High School were interviewed. Two teachers from each school were selected to participate. The teachers were chosen based on whether they use primary sources in their classroom and what they teach. The sample included teachers of various disciplines in social studies. During analysis, the subjects' names were not used, only anonymous titles (Teacher 01, Teacher 02, etc.) After the teachers were selected, they were interviewed in their classrooms at their schools. I recorded data on an audiotape and also took notes. The information will be destroyed at the end of the study and all data will be confidential.

Data Analysis

The analysis procedure consisted of taking notes on the data, creating codes for the data, noting patterns and themes in the data, and counting the frequency of codes. While I looked at the notes taken during the interviews and also at the transcripts of the interviews, I jotted down notes in the margins. I created codes for the data based on the participants' responses to each individual question and then looked at each individual interview question and noted patterns and themes in the data. As I noted the patterns and themes I also came across differences in the data, which will be noted in the analysis.

As I analyzed the data, three different themes emerged. The first theme focused on the particulars of primary source use in the classroom. Issues such as how often and what primary sources are used and where primary sources are acquired surfaced in this theme. The second theme dealt specifically with why teachers choose to use primary sources in their classroom and finally, the third theme centered on how primary sources were used with different "types" of students.

Within the first theme, the overwhelming idea mentioned by all of the teachers was that primary sources were those documents produced by someone who had directly experienced an event. In terms of how often primary sources are used in the classroom, the responses varied from "every day" to "not very often." The second idea that emerged within the first theme dealt with where teachers acquire primary sources and more specifically what types of primary sources they use in their classroom. The Internet, textbook, school media center, textbook materials, and college and graduate school classes were all mentioned by the teachers. As to what sorts of primary sources they use, all of the teachers said that they use written documents with two of the teachers saying that this was the only type of primary source that they use. In total, four different types of primary sources were mentioned.

The second theme focused more specifically on what motivates teachers to use primary sources in their classroom. The various responses given by the teachers show that there are many different reasons primary sources are used in the classroom. Two teachers said that they were motivated by student interest, two teachers said that they used primary sources because they help students make their own decisions about history, and two teachers said that they used primary sources because they help students gain a better understanding of the experiences of people of the past.

The final theme focused on whether teachers perceived that primary sources worked better with different types of students. The ideas within this theme varied greatly. Either the teacher thought that primary sources could be used equally well with all students or they felt that "regular" (as opposed to "honors") students just couldn't understand primary sources. Two teachers felt that usually you could only use primary sources with "honors" students. The other four teachers felt that primary sources could be used effectively with all students.

Discussion / Implications

After analyzing the data collected during the interviews with high school social studies teachers, I have reached the conclusion that, as the research pointed out, there are several different reasons that teachers are motivated to use primary sources in their classroom. All but one of the teachers gave reasons that focused on increased involvement and an increased awareness from students when primary sources were used. With this being the case, it was bothersome to me that only one teacher stated that he used primary sources every day and that several teachers stated that they didn't use them as much as they would like.

The purpose of this study was to discover what motivates high school social studies teachers to use primary sources in their classrooms. By interviewing six teachers in the Winston-Salem, North Carolina, area schools, the answer to this question began to surface. There are areas of this study that certainly would benefit from more research, but the answers provided can help educators begin to understand how and when to use primary sources in the high school social studies classroom.

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